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MONTREAL IN 1856.

A SKETCH

PREPARED FOR THE

CELEBRATION OF THE OPENING

OF THE

GRAND TRUNK RAILWAY OF CANADA.

BY

A SUB-COMMITTEE OF THE CELEBRATION COMMITTEE.

Montreal:
PRINTED BY JOHN LOVELL, AT HIS STEAM-PRINTING ESTABLISHMENT,
ST. NICHOLAS STREET.
1856.

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Nov. 13th 1856

PREFACE.

At a meeting of the General Railroad Celebration Committee, the following Resolution was adopted:—

Resolved.—That the Executive Committee be instructed to take the necessary steps to procure the compilation of an historical and general account of the City and its Trade and Manufactures, with suggestions as to the means of their future developement.

And to carry out this object, the following Sub-Committee were selected, viz:

B. CHAMBERLIN, Chairman.
L. H. HOLTON, M. P. P.,
ALFRED PERRY,
E. G. PENNY,
ALEX. MORRIS, M. A.,
T. C. KEEFER, and
JOHN ROSE, Q. C.

Some of the members of the Committee were not able to enter upon the discharge of its active duties, but others assumed the task, and they now submit the ensuing pages to the attention of the reader, in the hope that the facts therein stated, may tend to advance the common interests of Montreal, and the Province of which it is an important commercial centre.

Montreal, 12th November, 1856.

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A CELEBRATION PAMPHLET.

MONTREAL IN 1856,

ITS TRADE, RAILWAYS, MANUFACTURES, &c.

AN INTRODUCTORY WORD.

Coming amongst us, as our friends and visitors now do, on this auspicious occasion, from all parts of Canada and the adjoining States, for the purpose of uniting with us in the Ceremonies of this day, designed as they are to commemorate an event which inaugurates a new era in Canada, the Committee desire to place in their hands a concise, yet comprehensive view of the present position of the Trade, Commerce and Manufactures of this, the largest commercial City in British North America. The facts hereafter compressed into the brief space of these few pages lead us to anticipate a brilliant future for Montreal. With the rapid growth and steady progress of our great Province, Montreal will continue to advance, and we are sure our friends will cordially unite with us in our bright anticipations of a prosperous and happy future to this important Canadian Dependency of the British Crown, and with it to this City. Ere, however, addressing ourselves to the practical object of this pamphlet, we ask the guest, who to-day enjoys the hospitality of our citizens, as he pursues his path along our massive wharves and commodious harbour, or threads his way amid the crowds, who join in the celebration of the day, to travel back with us in imagination to the earlier history of this now busy mart of human industry, in order to contrast the past with the present; and while so doing, pardon us, if we endeavour to look beyond the fleeting present, and indulge in bright anticipations of what we regard as the destiny of our City.

THEN AND NOW.

And first, going backwards, we seem to see Jacques Cartier, a name ever memorable in the History of Canada, on the 3rd of October, 1535, entering for the first time the little Indian Village of Hochelaga, the germ or nucleus of first, the Town of Mount Royal, and so, of this City of Montreal ; eventful visit this, fraught with great results. We can sympathize with the emotions which would fill the mind of the explorer, as he gazed around on "the beautiful panorama of thirty leagues radius, that stretched out to the view from the eastern promontory of the mountain," and yet we cannot suppress a feeling of pity, as we think of the fate of those simple yet valiant sons of the forest, who gathered round Cartier as if before a superior being, and whose race has been so sternly driven back by the steady advance of civilization. But we may not pause upon this subject, and so we ask our visitors and citizens to recognize, if they can, the features of the following picture of Ancient Montreal, in the substantial stone and brick of our modern architecture :—

"The way to the village was through large fields of Indian Corn. Its outline was "circular; and it was encompassed by three separate rows of palisades or rather picket "fences, one within the other well secured and put together. A single entrance was left "in this rude fortification, but was guarded with pikes and stakes, and every precaution "taken against seige or attack. The cabins or lodges of the inhabitants, about fifty in "number, were constructed in the form of a tunnel, each fifty feet in length by fifteen in "breadth. They were formed of wood covered with bark. Above the doors of these "houses, as well as along the outer rows of the palisades, ran a gallery, ascended by "ladders, where stones and other missiles were ranged in order for the defence of the "place. Each house contained several chambers, and the whole were so arranged as to "enclose an open court yard, where the fire was made."*

Again we pass on, and by 200 years, with all their whirl of exciting events, and in 1760, the date of the British possession, we find Montreal a well peopled town, "of an "oblong form, surrounded by a wall flanked with eleven redoubts, which served instead "of bastions. The ditch was about eight feet deep and of a proportionable breadth, but "dry; it had also a fort or citadel, the batteries of which commanded the streets of the "town from one end of it to the other."

Again, striding on to more modern dates, we find that though the City was increasing in population and augmenting its trade, yet a New York writer some thirty years ago, thus characterized Montreal :—"The approach to Montreal conveyed no prepossessing "idea of the enterprise of its municipality ; ships, brigs and steamboats lay on the "margin of the river at the foot of a hill. No long line of wharves built of the sub-"stantial free stone of which there is abundance in the neighbourhood, afforded security "to vessels and owners ; the commercial haven looked as ragged and as muddy as the "shores of New Nederland when the Guedevrow first made her appearance off the "battery."

McGregor too, in his British America, a work of not very ancient date, thus described Montreal :—"Betwixt the Royal Mountain and the River, on a ridge of gentle "elevation, stands the town. * * * * There are no wharves at Montreal, and the "ships and steamers lie quietly in pretty deep water, close to the clayey and generally "filthy bank of the City."

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* Bosworth's "*Hochelaga Depicta.*"

Such then was our City in times by gone. In the days of our fathers, no stately steam-ships ferried us across the Atlantic, no floating palaces conveyed us safely, speedily and securely up and down our noble St. Lawrence, and across, as the "Times" has fitly termed it, "that magnificent series of inland seas, the high road from Europe to the North American Continent." Then, no great chain of railway linked town to town and city to city, almost annihilating distance. Then, the journey to Toronto was a toilsome matter of several weeks, and that to Brockville, short even as is the distance, occupied, with heavy cumbrous *batteaux*, three weeks. Now how changed! The wand of some fairy king has surely been here. But no! Industry, intelligence, labour, capital, all combined, and working for the advancement of this rising colony, have produced the marvellous changes which meet us on every hand.

The little cluster of wigwams has passed away, the more massive scientific fortress has crumbled in the dust, and in its stead there has risen the City you see before you, which is thus graphically described in the recent Report of J. D. Andrews, to the Senate of the United States,—an impartial witness:—

"This City, at the head of sea navigation proper, is the most populous in British "North America. Montreal is picturesquely situated at the foot of the Royal Mountain, "from which it takes its name, upon a large Island at the confluence of the Ottawa and "St. Lawrence, which, both in fertility and cultivation, is considered the garden of "Canada East. The main branch of the Ottawa, which is the timber highway to "Quebec, passes north of Montreal Island and enters the St. Lawrence about eighteen "miles below the City; about one-third of its waters are, however, discharged into Lake "St. Louis, and joining but not mingling at Caughnawaga, the two distinct bodies pass "over the Sault St. Louis and the Lachine Rapids—the dark waters of the Ottawa "washing the quays of Montreal, while the blue St. Lawrence occupies the other shore. "Nor do they merge their distinctive character until they are several miles below "Montreal. The quays of Montreal are unsurpassed by those of any city in America; "built of solid limestone, and uniting with the locks and cut stone wharves of the "Lachine Canal, they present for several miles a display of continuous masonry, which "has few parallels. Unlike the levees of the Ohio and Mississippi, no unsightly ware-"houses disfigure the riverside. A broad terrace, faced with gray limestone, the parapets "of which are surmounted with a substantial iron railing, divides the City from the "river throughout its whole extent."

Such is a sketch of Montreal as approached by the water. But our space forbids further enlargement upon this inviting topic, and we will therefore only further contrast Then and Now with reference to our Shipping, Revenue, Population, &c.

SHIPPING.

It may be of interest to the readers of this chapter to be informed of the average passages of vessels between Quebec and Montreal long ago. We have had access to an old memorandum book kept by the late W. Hall, Esq., the former Collector of Customs at this port, during the years 1820, 1821 and 1822, giving the average passages between the two ports during each month of the open season. In 1820, the average passage in May was 5 days; in June, 14 days; in July, 16 days; in August, 17 days; in September, 25 days; in October, 22 days; general average, 16½ days. In 1821, the average passage in May was 7 days; in October, 23; and the general average almost 14 days. In 1822, in May, 6 days, and in October, 25 days; general average, 15½

days. In 1824 a tug steamer was put upon the route. The passage is now made with the aid of tug steamers in about 30 hours.

In 1812 four vessels were built in Montreal, viz:—

The Ship "George Canning,"	470 tons,	by James	Dunlop,
" "Sterling,"	370 "	Hart	Logan,
" "Harmony,"	300 "	David	Munn,
And the Brig "Hunter,"		"	

In that year 53 vessels were entered, with an aggregate tonnage of 9,127, the largest vessel entered here from ports beyond the sea was the ship Eweretta, from London, of 342 tons (carpenter's measurement,) the smallest the brig Mary, from Ayr, 70 tons.

In 1813, (during the war with the United States,) there were but 9 vessels from sea, with an aggregate tonnage of 1,589, the largest being again the Eweretta, the smallest the brig Hamilton, of 151 tons.

In 1814, there were but 13 vessels from sea, with an aggregate tonnage of 2,341, the Eweretta still being the largest, the smallest (except coasting schooners from the Lower Provinces) being the brig Sunbury, of 110 tons, from Barbadoes, and the Ann and Elizabeth, of 140 tons, from Aberdeen.

In 1815, there were 52 vessels entered, with an aggregate tonnage of 10,123, of which the largest was still the Eweretta, the smallest the schooner Industry, of 84 tons, from Liverpool.

In 1816, there were 63 vessels, tonnage 12,056 ; largest vessel the Eweretta, smallest the schooner Mary and Jane, of 87 tons, from Lisbon.

In 1817, 46 vessels came, tonnage 9,215; the Leander of Liverpool, 360 tons, the largest.

No larger vessel visited the port for the next two seasons, the number of vessels and aggregate tonnage being much the same. In 1819, two vessels were built in Montreal, the ship Nancy, of 400 tons, sent to London, and the brig Harriet, of 245 tons, to Demerara.

In 1820, the number of vessels rose to 66, with a tonnage of 13,052. Two new vessels were built, names not given. Duties collected that year were £19,412, and the value of dutiable imports, £248,357. The largest ship that year was the Juliana, of 396 tons. In a foot note to this year's Report it is said:—N. B.—The Atalanta came through the lake with 10·2 feet draft of water,—as if that were a note-worthy fact.

The 53 vessels that came in 1821 had a tonnage of 19,064, and in 1822, 56, with a tonnage of 11,694. One new vessel was built this year. Two vessels left port on the 19th November. Mild weather. In 1823, there were 43 vessels, tonnage 9,069 ; two new vessels were built. In 1825, 77 vessels arrived, with a tonnage of 14,338. Next year 50 vessels, tonnage 11,251. In 1827, 64 vessels, tonnage 13,533. It will be observed that the average tonnage in any year was never far from 200 tons. The maximum never exceeded that of the Juliana, which seems to have made more than one voyage; and after 1821 the Eweretta, of 352 tons, disappears from the list, and is replaced by no vessel of so large capacity. The large vessels built here seem to have been sold abroad or employed in the Quebec timber trade.

Now with the increased water in the channel through Lake St. Peter, we have vessels coming here of 7 or 8 times the capacity. The Anglo Saxon, ocean steamer, has a capacity of 1,782 tons, and the Sardinian of 1,380 tons, cleared at this port with a cargo of grain during the present season.

The following is a table of the average tonnage of vessels trading between this and transatlantic ports during the past five years :—

AVERAGE TONNAGE OF VESSELS FROM GREAT BRITAIN, FOR THE FIVE YEARS, 1852 to 1856.

Vessels, 454. Tons, 202,833. Average Tonnage, 450; or Builders Measurement 514.

STEAMBOATS.

Turning now to steam navigation, we find that Montreal claims an honorable position in its history. In 1807, Fulton first launched his first steamer on the Hudson. In 1809, his example was followed on Lake Champlain and the St. Lawrence.

The first movement towards the steam navigation of the St. Lawrence was made by the late Hon. John Molson, in conjunction with David Bruce, a ship builder, and John Jackson, an Engineer.

The vessel built by them was the Accommodation; she was but a small boat, 72 feet in length, with 16 feet beam, propelled by an engine constructed by Mr. Jackson, of not much exceeding six horse power.

It required no ordinary courage and enterprise on the part of these pioneers, to undertake the difficult task which they thus essayed. But all the difficulties encountered were successfully overcome, and on All Saints Eve, 1809, the steamer started on her first voyage to Quebec. As she passed after nightfall some of the settlements, going without sails against an easterly wind, the sparks flying out in a continuous stream from her funnels, as has been the case elsewhere the consternation of the inhabitants residing along the banks of the river, at the unwonted sight, must have been very great, and we can easily suppose that it might well be taken for some phantom ship, or other fearful apparition. It was held dangerous to continue their progress through the night, and three days were consumed in the downward trip of 180 miles to, and four days in the upward from Quebec. Therefore it was, that though those who had to reach Quebec either by the tedious land route or the more uncertain transport of sailing craft upon the river, hailed the prospect of this more swift and certain steam navigation with satisfaction, the experiment proved a failure. The engine was of course too weak and of imperfect construction. Yet notwithstanding the lack of immediate success, and the money lost by the first attempt, Mr. Molson did not abandon the enterprise. His practical mind saw, even in that failure, the certainty of a final success, which he lived to realise. He went to England, and there contracted with the Firm of Bolton & Watt, for the engine of a larger boat, some of the castings and rougher parts of which were made in Lower Canada. The London engine builders could build the engine, but they knew nothing of the appliances by which it was adapted to navigation; these required to be furnished here.

In 1811, the new vessel, called the Swiftsure, was launched and at work, and in 1812 did "the State some service" in the transport of troops and stores, during the unhappy interruption of our relations with the United States. The boat had nearly five times the power of the ACCOMMODATION. Her length was 120 feet, her beam 24, the engine was rated at 28 horse power, and she was fitted up and equipped in all respects in a superior manner.

The MALSHAM was the next boat placed on the line, still superior to the Swiftsure; and after her the LADY SHERBROOKE, vessels at that time of very considerable tonnage and power.

At this period, the river was not lighted and buoyed as at present; it was therefore thought unsafe to run after dark. The pilots, too, were less experienced than at present; it was therefore usual, as we have said, to anchor at night. Frequent and expensive

delays were also caused by strong southerly winds in getting up the current St. Mary, more especially when the boats were heavily loaded, as they generally were at that time. Oxen and horses were sometimes employed to tow the vessels up this very powerful current.

In a few years later than the period referred to, we find the St. Lawrence Steamboat Company, and their competitors (afterwards their coadjutors,) the Montreal Towboat Company, running their boats during the night with perfect safety, and ascending the current in any state of the wind, triumphing over all the former difficulties of the navigation.

To the late founder of the St. Lawrence Company, the Hon. John Molson, the celebrity of being the first to establish steam traffic on our noble river must be accorded,—a traffic which, by the enterprise of Upper Canada and that of our neighbors in the adjoining States, is now made to enter from Superior City on Lake Superior, and Chicago on Lake Michigan, to the ocean—aye, and across the ocean also.

To the late Robert Hamilton, Esq., Upper Canada is indebted for the first steamer on Lake Ontario, the engine of whose boat was constructed from the model of the Malsham's engine.

In contrast with the dimensions, power and speed of the little Accommodation, we subjoin those of the John Munn, the largest steamer now plying between this City and Quebec :—

Length,.....	312 feet.
Breadth of Beam, ...	29 feet.
Cylinder,.....	72 inches.
Stroke,.....	11 feet.

She makes the downward trip easily enough in 10 hours, and the upward in from 11 to 12 hours.

The ensuing notice of the Canadian Steam Ship Company contains valuable information, and affords a striking contrast.

THE MONTREAL OCEAN STEAMSHIP COMPANY.

STEAMSHIPS.

The	Anglo Saxon,	1,782 tons,	Captain	McMaster.
"	North American,	1,782 "	"	Grange.
"	Canadian,	1,764 "	"	Ballantine.
"	Indian,	1,764 "	"	Jones.

These vessels were built at Dumbarton, in Scotland, of iron, in seven compartments each, but they are chiefly owned in Montreal. Their capacity enables them to carry 8,000 barrels of flour, or 40,000 bushels of wheat, in addition to passengers, stores, and coal for the ocean voyage.

They have made fourteen voyages this year, from Liverpool to Montreal and back, and have carried :—

From Liverpool to Canada.

805 First Class,
294 Second Class,
1,581 Third Class,

In all, 2,680 Passengers, and about 10,500 tons Goods.

From Canada to Liverpool.

581 First Class,
243 Second Class,
900 Third Class,

In all, 1,724 Passengers;
Besides 186,900 bushels Wheat,
52,400 barrels Flour,
5,500 barrels Ashes.
And a large quantity of Butter, Lard, Beef, Pork, Apples, and India Rubber Goods.

The average passage of these vessels has been :—
From Liverpool to Quebec, 11 days 19 hours.
" Quebec to Liverpool, 10 " 17 "

The shortest passage from Quebec to Liverpool was that of the Anglo Saxon, 9 days and 23 hours. The same vessel made the passage from Liverpool to Rivière de Loup, the Telegraph Station below Quebec, in ten days and two hours, beating the Asia and Atlantic, which sailed to New York, nearly two days on that passage.

BANKS CONNECTED WITH MONTREAL.

Montreal being a large commercial centre, as might be expected, the banking facilities afforded to the business community are on an extended scale. The Banks of Canada have been, on the whole, prudently and judiciously managed, and have proved remunerative to the shareholders, while there has yet been no instance of the stoppage of a Canadian Bank. The names and capital of the Banks carrying on their business in Montreal is here given, selected from the official statement, with a statement of whether the Office be a Head Office or Agency.

These Banks all, with one exception, transact business under Canadian Charters, and their Stockholders are liable in double the amount of their shares. The Bank of British North America holds a Royal Charter, the Head Office being in London, but the principal British American Colonial Office being in Montreal.

EXTRACT FROM THE OFFICIAL STATEMENT OF BANKS

Acting under Charter, for the month of September, 1856. *From the Auditor General's Department.*

Name of Bank.	Capital	
	Capital authorized by Act.	Capital paid up.
City Bank of Montreal, Principal Office.....	$1,200,000	$1,047,144
Bank of Montreal, Principal Office.....	6,000,000	5,273,520
Commercial Bank of Canada, Agency.....	4,000,000	2,976,940
Bank of Upper Canada, Agency.....	4,000,000	2,698,470
Banque du Peuple, Principal Office.....	800,000	795,590
Molson's Bank, Principal Office.....	1,000,000	324,680
Bank of British North America.....	5,000,000	5,000,000

SAVINGS BANKS.

The City and District Savings Bank transacts an extensive business. The Bank of Montreal has lately incorporated with its business a Savings Bank, which was formerly a private Institution.

THE POPULATION.

The population of the City is steadily increasing, and it is believed that at no former period was its trade and general business on a more healthy footing. The building of dwelling-houses and warehouses is going on with great energy, and to a very large extent. Within the year, ending 31st October, 1856, there were 543 dwelling-houses, warehouses, and shops of substantial character, being all brick or stone, erected or in course of erection; exclusively of stables, sheds and out-buildings. In a single short street, it may be mentioned, that the increase to the revenue of the City, from the erection of new warehouses this year, is £250. Of the present position of the City in its various interests, some general idea may be formed from the following reliable figures:—

In 1800	the population	was	9,000
" 1816	"	"	16,000
" 1825	"	"	22,000
" 1831	"	"	27,297
" 1851	"	"	57,715
" 1856	"	"	75,000, at a very moderate estimate.

THE REVENUE OF THE CITY,

From the Assessments imposed on Real Estate, was, for the year 1850, £15,220 0 0
" " " " " 1855, £26,740 0 0
" " " " " 1856, £28,761 0 0

The aggregate value of the Real Estate of the City for 1856 was £6,391,333 6 8

The Total Revenue of the City, from all sources, in 1856, exclusive of Water Works, was £60,758 0 0

The Revenue of Water Works was .. .. £10,500 0 0 = £71,258 0 0

The cost of the principal Market House, the Bonsecours, a stately building, was £71,825, but it yields 6 per cent. per annum upon its cost.

The City is well lighted with Gas, and with a proper foresight, the Corporation, with a due regard to the requirements of its growing population, has constructed most extensive new Water Works, in addition to those formerly in use.

These Works are, at this period, to be inaugurated, and the ensuing sketch of their magnitude and general features is therefore here submitted:—

THE MONTREAL WATER WORKS.

The following account of the rise and progress of the City Water Works is taken from the Report of the Water Committee:—

" The first attempt to supply the City of Montreal with water was made by Messrs. " Joseph Frobisher, John Gray, Daniel Sutherland, Thomas Schieffelin and Stephen " Sewell, who were incorporated in 1801, under the title of " the Company of Proprie- " tors of the Montreal Water Works," with a capital of £8,000, and power to increase it

" to £12,000. The water was obtained from Springs on the Mountain, near Sword's,
" and conveyed in wooden pipes around the Southern slope under Monklands, and two
" Reservoirs were established, one on the Priest's Farm, at the corner of Guy and Dor-
" chester Streets, the other near the site of the Donegana Hotel. A considerable sum
" of money was expended, but from the temporary character of the work, and more espe-
" cially from a deficiency of water in the Mountain Springs, the establishment fell into
" disrepute, and proved almost a total loss to the Stockholders, who, in 1816, sold out
" their Charter for £5000, to the late Thomas Porteous, Esq., and others.

" The new Company took up the wooden pipes and replaced them with four inch iron
" ones, and abandoning the Mountain Springs, established Steam Engines on the site of
" the present works, and pumped the water into wooden cisterns placed on what was
" then called Citadel Hill. The wooden cisterns failed and were replaced by the present
" ones, erected in 1827, which are substantially built and lined with lead, their contents
" 240,000 gallons—at an elevation of ninety-seven feet above the St. Lawrence. The
" amount expended by Mr. Porteous was about £40,000. The four inch pipes proved
" insufficient, and in consequence of the death of Mr. Porteous, by whose enterprise it had
" been sustained, the undertaking again fell into disrepute in 1830, and after being adver-
" tised for two years was purchased by M. J. Hayes, Esq., for £15,000, who formed a
" third Company in 1832. This Company replaced the principal mains with ten inch
" pipes, renewed the engines, and added additional ones. In 1843, they had three
" engines, one of which, capable of rising 40,000 gallons per hour, was used both for
" pumping and grinding—a grist mill being attached to the works; the other, capable
" of rising 53,000 gallons per hour, was used solely for pumping, and the third was em-
" ployed in drawing lead pipe. Up to the first of February, 1843, the Company had
" laid down fourteen miles of pipe, had established three taps for the sale of water to
" carters, and had sixteen fire plugs of their own, in addition to those owned by the Cor-
" poration. The amount expended under Mr. Hayes' management was about £10,000.

" In January, 1843, the propriety of the Water Works becoming the property of
" the Corporation was first mooted in the City Council, and after treating for two years,
" the City purchased the Company out in the month of April, 1845, for the sum of
" £50,000.

" In June, 1845, immediately after acquiring the Works, the Corporation decided
" to extend a *conduit* from the pumps into the river, as far as deep water, in order to
" procure a purer supply.

" In July, 1847, a report from the Special Committee on Hydraulics—recommend-
" ing the offering of a premium for the best plan of pumping the water of the St. Law-
" rence, by water power from the Lachine Canal, into Reservoirs on the Mountain—was
" read and adopted, but it does not appear that anything resulted from it.

" In 1849, a Reservoir, at an elevation of one hundred and thirty feet above the St.
" Lawrence, capable of holding 3,000,000 gallons of water, was constructed at Côte à
" Baron at a cost of £3,000.

" In December, 1850, it was decided to extend and improve the distribution by
" laying down pipe to the extent of £10,000. Since the purchase by the City, about
" 30,000 yards of cast iron and 12,000 yards of lead pipe have been laid, and the number
" of fire plugs increased to one hundred. The amount expended may be set down at
" £30,000.

" On 8th May, 1852, the Water Committee resolved to make application to the
" City Council, at its next meeting, for authority to procure a survey, plan and estimates

" for bringing water into the City from Lower Lachine, or any other place that might be " deemed expedient, and to ask the sum of £250 for this purpose.

" On 29th May, a Special Meeting of the Water Committee was ordered for the first " June, to consider the best mode of proceeding in the scheme of getting water from " Lower Lachine, and to name an Engineer to make the necessary plans and estimates. " On the 5th of June it was resolved to engage Thos. C. Keefer, Esq., as the Engineer, " and on the 9th of August, the scale of the proposed plan was determined by authoriz- " ing the Engineer to provide for a supply of 5,000,000 gallons daily, with Reservoirs " at an elevation of 200 feet above the level of the Harbor. On the 25th of October, " Mr. Keefer submitted his report which was approved, and ordered to be printed in " French and English."

We now submit a sketch of

THE NEW WATER WORKS.

THE AQUEDUCT.

The water is taken from the St. Lawrence, about one and a half miles above the Lachine Rapids, where the elevation of the river-surface is about thirty-seven feet above Montreal harbour. It is conducted for a distance of five miles through an open canal, (forty feet wide on the water-surface, and eight feet deep at the lowest stage of the river,) to the River St. Pierre, at the outskirts of the city. Here its further progress is arrested by the Lachine Canal, as well as by the want, at a nearer point to the city, of a suitable tail-race for the waste water, and also by the sudden depression in the level of the ground.

At the termination of the Aqueduct, a capacious basin is formed in order to give surface area sufficient to prevent the head being suddenly drawn down by the large quantity of water required to start the wheels.

The Aqueduct intercepts three streams, which are carried under it by syphon culverts, and is crossed by twelve bridges, ten of which are proprietors crossings, the remaining two being substantial stone structures of two and three arches respectively, on public roads.

More than half of the Aqueduct is in thorough cutting from 10 to 23 feet in depth, one and a quarter miles of which are through solid rock, seven to fourteen feet thick, the width of the cut being thirty-four feet. At no point is the natural surface below the bottom level; the pressure on any embankment is, therefore, less than ten feet head of water. It is lined with stone throughout its entire length, side slopes, bottom and top banks, for the purpose of keeping the water clear, protecting the banks from its action, and preventing the cut from filling up by the was of the slopes.

The inclination of the bottom is five inches to the mile, or a fall of about two feet in the whole distance; the top banks are, however, horizontal, so that the St. Lawrence level may be brought down to the wheels. The depth at the lower end is therefore ten feet at low water, and one foot more in the basin or "settling pond," which at the present level of the river (November 1856) is twelve feet deep.

The Aqueduct is provided with stop gates at four points, and a waste-weir in the terminal basin, with an overfall of forty-four feet in breadth, the sill of which is four feet under top bank. Here the whole flow of the Aqueduct could go by without a rise of water which could overflow the banks.

THE PUMPING MACHINERY.

At the termination of the Aqueduct, two iron water wheels, twenty feet diameter and twenty feet broad are erected, the bottoms of which are placed twenty-two feet above Montreal Harbor, in order to escape the back water caused by the winter rise of the St. Lawrence. These wheels are upon the suspension principle, "high breast" or "pitch back," with ventilated buckets; the power is taken off the periphery, and from the loaded side, by means of an internal segment working into a pinion placed directly under the point where the water is let on to the wheel.

The pinion which is five and a-half feet diameter, drives a three throw crank, working three pumps, the barrels of which are twenty inches bore, with a stroke of four feet. The pumps are "bucket and plunger" ones—the area of the plunger (which is fourteen inches diameter) is one-half that of the pump barrel, and therefore displaces one half the contents on the down stroke, while the bucket draws out the remaining half on the up one, discharging the whole contents at each revolution of the crank through a single outlet to the main. They may therefore be said to be double acting in principle although only single acting in effect. Each pump is fed by an eighteen inch feed pipe under a twenty-four feet head, from the same level that drives the wheels; the pressure on the seat valve being more than sufficient to overcome its weight. The three pumps are placed vertically and work into an air chamber seven feet diameter and fifteen feet high, from which the water is expressed in a continuous stream through a branch pipe (containing a reflux valve) into a thirty inch main.

The water is admitted and discharged from the Wheel House through submerged archways, under covered frost proof passages, extending above and below the building.

THE PUMPING MAIN

Is two and three-fourth miles in length, having everywhere at least six feet of covering. For about one hundred feet from the Wheel House it is thirty inches diameter, when it branches into two lines, each twenty-four inches diameter, which are continued under the Grand Trunk Railway, the River St. Pierre, and the Lachine Canal, (which latter is passed by a culvert, at a level twenty feet below the surface,) ands hortly after ascends within six feet of the natural surface, where the two mains are connected again, and a single one only is continued to the Reservoir. The double mains are provided with valves by which, if an accident occurs to one, the other can be used,—a precaution required here, not only on account of the deep cuttings, the river, canal and railway crossings; but because this portion of the main being below all drainage, can only be emptied for repairs by pumping; and, therefore, involves more delay than any other part of the line.

The culvert under the Lachine Canal is two hundred and forty feet long, and twelve feet wide, by five feet high in the clear. Being of wood, it is kept filled with water for preservation, but can be emptied in a few hours, when the whole or any part of the mains can be removed, replaced, or enlarged, without interfering with the navigation.

After crossing the Lachine Canal, the pumping main rises six feet, and then continues level, under the Upper Lachine Road, and the Lachine Railway to Côte St. Antoine, which it ascends by the ravine outside the Dorchester Street Toll Gate, after passing which, the intermediate summit (one hundred and twenty feet above the harbor) is attained. Here are an air escape and a reflux valve, to prevent the return of water in case a pipe should burst below the hill, and to avoid the "water hammer" there, where the pressure is one hundred and eighty-nine, and one hundred and eighty-three feet head. From the inter-

mediate summit the main follows the line of St. Catherine Street, descending thirty feet to McGill College Avenue, where the Reservoir branch is taken off,—the main continuing on to the distributing pipes. While the pumps are working they supply the town—under the constant pressure of the Reservoirs. If the city is drawing more per hour than is pumped, the Reservoirs supply the deficiency without sensible loss of head; if less, the surplus goes to the Reservoirs. When the wheels are standing the water returns from the Reservoirs by the same pipe through which it ascended, and supplies the city.

THE RESERVOIRS

Are excavated out of the solid rock, and have a water surface of about ninety thousand square feet, two hundred and five feet above Montreal Harbor, with a depth of twenty-five feet. The limestone rock is traversed by trap veins, and the stratification being destroyed or cemented by igneous action, the rock is naturally water tight. The extreme length is six hundred and twenty-three feet, with a breadth of one hundred and seventy-three feet, formed into two Reservoirs by a division wall upon the minor axis. The rock mountain side slopes toward the city about one in ten; the water is therefore retained by a masonry wall, along the front, twenty-eight feet high, and by the natural rock in rear. The pumping main terminates in a well opposite the division wall, which is in communication with each Reservoir by a culvert, provided with a sluice gate, by which the Reservoirs can be emptied within two feet of the bottom, the remaining water being withdrawn when required by drainage pipes. There is an overflow at the top of the wall, by which, when the Reservoirs are filled, the surplus of the mains is discharged into a drain leading to the creek on the College grounds.

The two Reservoirs contain about fifteen millions of gallons—from ten to twelve days supply at the present season of the year. They can be filled by the two wheels in seventy-five hours pumping, the wheels also providing the consumption of the city during that period. One wheel working twelve hours per diem supplies the present demand, giving about double the quantity furnished by the old works.

The New Water Works were commenced in June, 1853; the first water was pumped into the Reservoirs September 11th, 1856, but they were not filled until October. Since they were filled, the wheels have stood twelve days without exhausting the Reservoirs. It is expected, however, that the consumption will increase so as to reduce the capacity of the Reservoirs to a week's storage.

The total expenditure upon the New Water Works, to 31st October, 1856, is £285,000 of which £33,000 is for land purchases, £30,500 for interest and discount, and about £10,000 for distributing pipes, making the cost of the works of the Aqueduct, Machinery, Pumping Main, and Reservoirs, about £212,000.

The City, as we have stated, is well lighted. The following is a sketch of

THE GAS WORKS.

The New City Gas Company of Montreal:—

Was incorporated in July, 1847.
Its Capital is £75,000.
The yards of Pipe laid amount to 57,120, or 34 miles.
The number of Street Lamps erected is 455.
The Coal used in manufacture of Gas last year (1855) was 4084 tons.
And the quantity of Gas manufactured was (1855) 28,292,000 cubic feet.

The Price charged the Corporation for street lamps per annum is £6.
The Price charged for Gas per 1000 cubic feet is 17s. 6d.
The Consumers have increased 75 per cent. in the last three years.
The number of Hands employed in the work is 50.

TRADE AND COMMERCE.

From a very early stage of improvement in the art of navigation, it must have become evident that water carriage was that which presented the cheapest and most easy mode of transporting merchandise from place to place. If goods were in some cases carried in caravans upon the backs of animals, it was either because they were of great value in proportion to bulk, and therefore because the charges of conveyance added little to their cost at the market where they were sold; or else, because water routes were wholly unknown, or extraordinarily circuitous. We need give no examples in proof of that which, during many centuries down to our own days, was considered less as an axiom to be stated than a self-evident truth. Accordingly, with some exceptions such as occur to all rules, we find that great cities have always arisen either upon convenient ports of the sea, or upon large navigable rivers and inland waters. The manufacturing city is a modern form of the aggregation of men; but inasmuch as a manufacture can rarely be perfected with a single material, it is essential even for the establishment of a manufacture in a locality, where the chief material is found in great abundance, that there should be easy and cheap means of bringing to the same spot the secondary materials. Besides, when the manufacture is completed, if the article be heavy or bulky, facilities are required for its distribution to the consumer.

If these rules are universally true, they must have been especially felt by the settlers in a new world, where there were but two means of traveling from place to place, the feet of the pedestrian, or the canoe of the voyageur. "Hence the vast importance, "which, in the early history of this continent, was imputed to the possession of the St. "Lawrence and Hudson, the two rivers by which access was obtained from the sea to "the great fresh water lakes, and thence, by overcoming a few portages, to every part "of the vast American wilderness east of the Rocky Mountains, from Hudson Bay to "the Gulf of Mexico."

The French, during a long occupation, held the possession of the most direct outlet; and the warlike and often repeated struggles which took place about Lake George, and again in the Mohawk country, show how intently they desired to exclude their rivals from the inferior route of partial navigation between the seaboard and the lakes, and how vigorously these rivals strove to make their way in that direction.

No wonder that the spot on which Montreal now stands was early chosen for the foundation of a commercial town. It is true that the commerce of Canada in its first days was not such as to employ many hands in the intellectual or manual operations which we now see going on around us. Peltry was, for a long period, the only traffic to which importance was attached. In collecting the skins, which made the object of that trade, many men, red or white, must have been employed. But the cargo of a few canoes, rich though they were in value, required little labour for their transfer to the hold of the European merchantman, and the market was managed by a very few agents of the great houses in France. Still, such as the trade was, Montreal presented a most favorable site for carrying it on. On one side of the island were to be found the lowest rapids of the Ottawa, and on the other the lowest rapids of the St. Lawrence. The

painful inland navigation, in some places wholly interrupted by portages, and in others for long reaches capable of being conducted only with the most toilsome labour, ended at this island. On the other hand, vessels arriving from the eastern side of the Atlantic could reach this point, but could ascend no higher. Never was place for shipment and transhipment more plainly indicated by natural laws. From hence, more or less navigable water-courses spread out like a fan over hundreds of thousands of miles in the interior, and permitted the canoe of the Indian trader to penetrate in all directions, while, on the other hand, a broad and safe river led to the great ocean, whose farther waves washed the walls of all the seats of established civilization.

When the vagabond labours of the *voyageur* and native hunter gave way before the more steady toil of the agricultural settler, the advantages which had first prompted the selection of the Island of Montreal as the site of a City were by no means diminished. The articles of export had become changed, and needed no longer to be searched out in widely extended journies; but the timber, and ashes and breadstuffs, which began to take the place of skins in the exchange with Europe, could reach the entrepot only by water, and could be sent only thence by the same means. Farms, if they were to send their produce abroad, must be situated on or immediately in the neighbourhood of navigable waters. The St. Lawrence and its tributaries, even while Niagara still closed the passage westward, bathed more wheat growing and more timber producing lands, than any other river in America except the Mississippi. Hence there was high promise that the most convenient port for the meeting of inland with sea-going vessels must continue to be a point of great commercial importance for all the northern part of North America.

The St. Lawrence, however, with all its acknowledged capacity, was not without its drawbacks. Foremost was the long winter which sealed its waters during six months of the year; and next may be classed the dangers of a navigation of seven hundred miles between Belle Isle and Quebec. There were other circumstances which threatened that commercial prosperity which once appeared to be the undoubted appanage of the most convenient port of this large river,—using the term "most convenient" in reference to breadstuffs, the chief produce of the west, and to manufactured goods, the chief article in demand by the West. The principal of these was the discovery that the most fertile lands lay beyond the barrier formed by Niagara. Hence the population which would otherwise, in the natural order, have filled up the nearest land first, was tempted to the shores of Lake Erie, and the country lying between that lake and the head waters of the Mississippi. It has been in this region that the great emigrant population has chiefly established itself, leaving the less fruitful shores of the St. Lawrence and Lake Ontario comparatively bare of inhabitants.

But for the Falls of Niagara, it is probable that all the inhabitants westward of that great break in the navigation would have transacted their business by the St. Lawrence. Niagara cut them off from the Ocean; and they were compelled to seek a new exit. Hence the construction of the Erie Canal, which by the subsequent addition of a branch to Oswego, has even encroached upon the natural rights of the waters of the St. Lawrence. The Erie Canal not only gave the western population an outlet, but it gave them an outlet not beset by the difficulties which are every winter renewed in the St. Lawrence; for though produce can reach the seaport from the West *viâ* this river, as late as it can reach New York *viâ* the Erie Canal, yet once arrived at the point of shipment by sea, it was liable to be detained by ice in the St. Lawrence, while it was free to depart at New York.

The enterprise of the people of Canada would not, however, submit tamely to the destruction of their own channel of trade. They sought to rival the Erie Canal, by the construction of the Welland Canal upon so large a scale as to render available the *general* advantages of the St. Lawrence navigation, throughout all the regions watered by the lakes, which form the head waters of that river. In this struggle they had, on their side, the superiority which large vessels always have in rivalry with small ones. By the construction of the Welland Canal and the canals on the St. Lawrence, the Canadians secured throughout their waters a passage for ships, instead of for barges only. Against them they still had the long winter; the dangerous, while unlighted, navigation below Quebec; and last, but perhaps more important than all the rest, the never ceasing demand for an amount of tonnage outward, largely in excess of that which could be required inward. The chief articles of produce which could be expected to pass the canals were wheat and flour. But the wheat and flour, arrived at a St. Lawrence sea-port must compete for Ocean shipping with lumber, whose demands were far more imperative. It is plain that under these circumstances the freight of bread-stuffs could never be permanently much lower than the equivalent freight which exporters of timber could afford to pay, and exporters of timber have always had to pay rates that would cover the voyages out and home. This is not the normal and usual condition of the trade at Atlantic sea-ports, and hence another reason why they have attracted more of the export of breadstuffs than it would seem from geographical considerations merely, should have fallen to their share. It is to be remarked that for a considerable period prior to the change in the British Corn Laws, legislative enactments, the precise details of which were altered more than once, but which always tended in the same direction, afforded a protection to the colonial exportation, which greatly favored its progress; but since the repeal of the Corn Laws this has been of course withdrawn, and there is now no artificial stimulant.

In spite of all these drawbacks, the victory, even if we had still to do only with the ancient modes of propelling ships, must be considered as doubtful. The dwellers on the Lakes and the St. Lawrence are, perhaps, only beginning thoroughly to understand all that they gain by improvements which must be still called recent; and the latest developments seem to show that by making use of all ameliorations in the art of navigation, we should still snatch our share of the traffic from our rivals. Perhaps it would be more correct to say that the whole traffic promises to be so immense, that all routes may expect to have full occupation without those interested in the one envying those concerned in the other. It appears, indeed, that in the cycle of harvests there will be years when the demand for breadstuffs by Europe will almost cease, and in such seasons the export by sea from the St. Lawrence will probably fail, as, except for some of the fisheries in the Gulph, the St. Lawrence does not offer the same facilities as Atlantic ports for shipment to other than European consumers.

In imports there has been a steady progress, in the trade of the river keeping pace with the growth of wealth and population in the country. It is true, however, that Montreal, which once had the entire population of Western Canada for customers, has that monopoly no longer. This is partly owing to the repeal of the differential duties, which formerly gave a small but probably an overrated advantage to the Montreal importer. It is almost impossible, however, to overrate the relative gain of his rivals on the seaboard, from another cause—we mean the extension of the system of Railways. The true protection enjoyed by the St. Lawrence import trade, say as lately as twelve years ago, was not only the 5 per cent. additional duty levied on merchandise entering the Province through the United States, but also the far more efficient check to the

trader from the South, found in the immense tract of land, or of inferior water carriage, by which he had to pass from the seaboard to reach the lake. In imports, too, the peculiarity of position arising from the immense shipments of lumber at Quebec was inoperative as against the Canadian merchant, or rather it was favorable to him in certain coarse, cheap, and heavy goods; for some classes of freights to the St. Lawrence were lowered by the fact of large fleets being bound thither twice in the twelve-month, of which the majority would always be in ballast. The rivalry of the Atlantic ports of the Union was, however, most unfairly encouraged in the import trade by the subsidy bestowed upon the Cunard steamers. These vessels, though running to foreign ports, nevertheless received from the British Government aids which enabled them to fix their rates of freight so low as to exclude fair competition in certain classes of goods by vessels coming to Canada, to say nothing of the fact, that these aids caused the establishment of steamers to Boston and New York, while Canada could pretend to nothing but sailing vessels.

The invention of Railroads, however, introduced a new element into the question of routes, and the creation of a system of iron highways between the seaboard and the lakes opened fresh commercial prospects, in some respects not very flattering to the hopes of the merchantile and shipping interests of Canada. Not only did these Railways tend to equalize the cost of conveyance by land with that of conveyance by water, but by opening practicable channels for merchandise, at a period when the Erie Canal and the St. Lawrence were alike frozen, they enabled the inhabitants even of Western Canada to receive spring dry goods just at that period when they were most in demand. Obstructed as the navigation was by ice till late in May, spring fashions arriving by the river could hardly be opened west of Montreal much before June, and some longer time was of course required before they could be distributed in the interior. The American Government, to secure all the benefits promised by this change, established a system of bonding, which relieving goods passing that way to Canada from all charges not absolutely necessary to protect the revenue of the United States, raised the facilities by that route to the highest possible pitch. These circumstances, joined, perhaps, to the stimulus of novelty, for a short time turned a large portion of the Western Canadian buyers from Montreal to New York, and it was by some believed that the import trade of the St. Lawrence must be annihilated. The panic, however, was short, and it has been followed by a strong conviction that this great river must have maintained its supremacy in general trade, even without the improvements to be shortly noticed.

This conviction has prompted renewed exertions on the part of the merchants of Montreal, and these few years, we have had cargoes from Holland, France, Spain, the Mediterranean and China; and the East Indian branch of our commerce is likely to be pushed with a great deal of vigour. All these trades were, till lately, entirely unknown. The West Indian and Lower Provinces trade too has greatly revived. When Montreal is spoken of here, it is not that she is to have a monopoly of any of these branches. The Upper Canadian importers will no doubt share in these as they have done in the old established lines of trades.

Before describing these improvements, let us look for a moment at the position of affairs at the close of the year 1855. During the nine years which had elapsed immediately before, every thing that could depress the trade of the St. Lawrence, and augment that of its rivals, had been done,—1, the corn laws had been repealed by the British Government, and the protection afforded to the Canadian Exports in breadstuffs had been abolished,—2, the incidental protection on the import trade of the St. Lawrence arising from the differential duties levied on goods coming from the United States,

and which was imposed for the protection of British Commerce was repealed;—3, The American bonding system had been perfected;—and 4, The American lines of Railway had been pushed, from the seaside to all parts of the Canadian frontier.

Against these many injurious influences, the St. Lawrence trade had gained only in two directions. The last stroke had been put to canals, so as to secure a draft of water in every part of the navigation between the head of the Lakes and Montreal of ten feet at the lowest. And the shoals of Lake St. Peter had been successfully dredged, so as to obtain sixteen feet of water, summer level. Nevertheless, it will be seen from the following figures, that though the import trade fell off relatively, that is to say, ceased to be wholly transacted in one direction, it increased positively, the demands of the country being so augmented, that the business of supplying them partially had become greater than that of supplying them wholly, had formerly been:—

IMPORTS TO THE PORT OF MONTREAL.

Years 1845.....	£2,614,911
" 1846.....	2,303,908
" 1855.....	3,093,145
" *1856...(estimate)....	3,993,145

The export trade generally has received a great impetus during the past year owing in part no doubt to the establishment of the Ocean Steam line. The exports from Montreal for the first three quarters of last year, were but £333,610; this year they have risen to £716,475, or more than double.

This is, perhaps, the proper place also to note one other circumstance in the business of Montreal, which, though not bearing directly on either her import or export trade, is yet likely to exercise a powerful influence on her future prosperity. The City, having its foundation and whole principle of life in commerce, the Lachine Canal was constructed to aid that commerce. But it has happened, in this instance, as in many others, that the perfecting of one purpose has given birth to new projects, and the head of water on this canal has been rendered available for the creation of water powers which have been applied successfully to the movement of extensive machinery over a large extent of ground. Thus a step intended to promote the business of exportation and importation, has led to the establishment of a considerable manufacturing interest, which is likely rapidly to increase. As a chapter will be specially devoted to that subject, it is unnecessary to do more here than to mention that the origin of large manufactures in Montreal is to be found in the attempt to satisfy the wants of trade.

We come now to the improvements which have taken place since the commencement of the present year. In the first place, we rank the establishment of the Canadian steamships which, by the regularity and shortness of their trips, have incontestibly established that the most speedy route between Europe and the largest part of North America, embracing all New England, the State of New York, part of Pennsylvania, and most of the Western States, and the valley of the Mississippi, is through the River St. Lawrence

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* This estimate is made thus. The returns are already made up from the beginning of the year to the 5th October, 1856. This shows a total of imports of £3,576,550 against £2,612,573 in the corresponding period of 1855—an increase of £963,977. The month of October in 1856 is known to have been again largely in excess of that in 1855. If therefore in the remaining two months of the year there should be some slight falling off, which is not probable, there can be no doubt that the estimate of £900,000 increase for the whole year will be greatly within the true line.

at all seasons of the year when its waters are navigable. Two instances may be mentioned in proof of this statement. It is understood that cotton has been already conveyed from the uplands of Tenessee *viâ* the St. Lawrence to New York, and passengers from Liverpool to New Orleans have selected the St. Lawrence as the shortest route to the place of their destination. It is obvious that the shortest route must have vast advantages for all kinds of conveyance, and that for many descriptions of trade, as well in goods as in passengers, no other consideration can weigh against speed. The success of these experiments brings us back to our first statement of the superiority of water carriage over all others, and enables us confidently to lay down the proposition that steam has restored to the St. Lawrence, during the summer months, all that supremacy which the establishment of the Railway system in the United States seemed to have taken away. The very circumstances which have hitherto prolonged voyages of sailing vessels and heightened the insurance upon them, will, for the future, shorten the voyages of and reduce the insurance upon steamships. The sailing vessel requires plenty of sea-room, in order that she may continue to stand upon that tack on which she gains most until favored by another slant of wind. In a river she must stand almost as long on her losing tack as on her gaining one. Besides, a sailing vessel in a land-locked navigation is always exposed to the risk of becoming embayed, and the discovery of her peril is frequently made only after the time for a remedy has passed. With a steamer, on the contrary, except in the very worst of weather, a danger once discovered is already avoided, and the shore which threatened the sailing vessel at every moment, merely serves to secure smooth water to the steamer. The fact that nearly one-third of the distance between Liverpool and Quebec is made in smooth water, has, no doubt, powerfully contributed to the success of the Canadian steamers. The same considerations will, of course, eventually reduce the insurance on St. Lawrence voyages to a parity with that charged upon other voyages across the Atlantic. This change has already begun with respect to steamers, but it will no doubt go farther with them, and even apply to sailing vessels, as a consequence of the establishment of powerful steam-tugs to aid ships in the Lower St. Lawrence, and of the perfect lighting of our coasts, now resolved on by the Government.

It must not be forgotten that if Montreal reaps the full benefit of the establishment of this line of steamers, it is due to the enterprise of her citizens, and especially to the energetic efforts of one of them. But for this enterprise and these efforts, no vessel approaching to the size of the Canadian steamers could have reached the city. The deepening of Lake St. Peter, however, at local charges, under the direction of the Harbor Commissioners, headed by their Chairman, the Hon. John Young, from 11 feet water to 18 feet, has secured this gain to the City of Montreal. Following close upon the experiment of vessels having steam for their principal motive power, has been the trial of sailing vessels with steam power as a mere auxiliary. Ships of this class are, of course, much less speedy than those which have formed the line contracted for by Messrs. Edmonstone, Allan & Co., but they are on the other hand economical and sure.—They can carry large cargoes, especially if they call at Sydney, to re-coal, in voyages on which they meet with much adverse weather, and one of them has reached Montreal from London in 21 days, equal probable to 18 days from Liverpool. This class of vessels promises much for the future of Canadian importations, and the hopes founded upon the success of both classes of sea-going steamers will be more certainly realized, if the design now on foot, for creating a line of first class propellers between Montreal and Chicago, shall be carried out in an enterprising and vigorous spirit.

Subjoined is a statement of distances tending to show the superiority of this route over all others, between Europe and North America.

Distance from Montreal to Liverpool by the St. Lawrence and the Straits of Belle Isle is.....	2750	miles.
Distance from New York to Liverpool by the shortest sailing circle across the Atlantic.....	2980	"
Difference in favor of Montreal.....	230	"

The next improvement in our channels of trade is the establishment of that Canadian system of railroad, whose completion has given occasion for this pamphlet. This new mode of communication by land will not be rightly understood if it be regarded as a substitute for or a rival of the water route. We consider it as subsidiary to and as the complement of that which must always be the chief high way from the Ocean to the interior—the great inland chain of lakes and river. It has been already shown that the effect of the establishment of American Railways from the sea-coast to the frontier was to divert to Atlantic ports, a great portion of the business of which nature seemed to have conferred a monopoly on the St. Lawrence. And it has been pointed out that this change arose from two circumstances. First, that with regard to some classes of goods, the object to be chiefly achieved in their carriage is speed. Second, that during a part of the year the navigation being completely sealed by ice, any conveyance which approaches in facility that by water must secure a considerable portion of the traffic, in goods which would otherwise lie over till the thaws of spring. It happened that in an important branch of trade, both these reasons concurred to favour the overland route. Dry goods for the early spring trade are in demand in the West at a time of the year, when the ice still forbids the entrance of vessels to the ports of Quebec and Montreal. The introduction of Railways, therefore, while they continued to be wholly in the hands of our rivals had placed us at every possible disadvantage. BUT ALL THAT CANADIAN COMMERCE HAS TO GAIN FROM RAILWAYS HAS YET TO COME, and is, it is to be hoped on the eve of being realized. Hereafter the goods which arrive at Montreal in from twenty-four to forty-eight hours earlier than they can reach New York will be at once put upon the Railroad and forwarded to their destination in a less number of hours than would be required to lay them down in the warehouse of the consignee, if the commencement of their inland journey had been from one of the seaboard cities. The following comparative table of distances from Montreal and from New York will show the truth of this proposition:—

THE DISTANCE FROM HAMILTON TO NEW YORK:—

New York to Albany.....	150	miles.
Albany to Rochester.....	229	"
Rochester to Suspension Bridge.....	74	"
Suspension Bridge to Hamilton.....	43	"
	496	"

THE DISTANCE FROM HAMILTON TO MONTREAL:

Grand Trunk to Toronto.....	333	miles.
Toronto to Hamilton.....	35	"
	378	"

Thus, during the period of navigation, the opening of the Grand Trunk, and the connections it affords, must secure to Canadian merchants the supply of all the goods, of which the choice of route depends wholly on speed.

But it is manifest that a commerce which can be carried on only during a portion of the year must be subject to many inconveniences. The connexion between buyer and seller is broken by the break in the navigation, and time, labour, and perhaps some diplomacy is required to renew it. Besides, the annual cost of the maintenance of business establishments is nearly the same whether they are able to transact business during eight months or twelve. It is in these facts, that we see the vast importance to the trade of the St. Lawrence of that link in the Grand Trunk system which lies between the north bank of the river at Montreal, and the City of Portland, including of course the Victoria Bridge. This branch of our own highways secures to the St. Lawrence by artificial means, what nature has denied her, a port open all the year round, and will thus enable the Canadian wholesale merchant to keep up his transactions during a season which has hitherto been a blank to him ; and this season, let it be remarked, especially, includes those two or three weeks of the early spring in which the dry goods proper for summer wear arrive at American ports. The Montreal merchant will, by way of Portland, be enabled to offer to his Western customer all the latest styles, quite as early as the latter could see the same goods, at New York or Boston,—and he will thus be saved from the mortification, to which he has lately been subjected of knowing buyers forced to go to the seaboard for seasonable goods, avail themselves of their visit to purchase staples which he could have supplied on better terms. The fact need not be concealed, that the way from Portland to a large portion of that great west, with which Canadian Merchants hope to transact an extensive trade, is rather longer than that from New York ; but the difference in the cost of freight on those goods which are annually conveyed by Rail will add an almost imperceptible charge to their cost when laid down to the consumer, while in respect to speed, the longer road may be expected to make up for that inconvenience in its freedom from breaks and transhipments between different roads, in the unity of its administration and the superiority of its construction, lead us to believe that the many mercantile agencies of Portland will no doubt devote themselves peculiarly to the Canadian trade, which will also have the almost exclusive attention of the Grand Trunk Company, and thus it is to be expected that a great saving in time will be effected, and that in this respect the Canadian route will equal any other if it do not surpass every other.

THE CANADIAN INLAND AND OCEAN NAVIGATION.

Montreal, at the head of sea navigation proper, is the port for the great chain of River, Lake and Canal navigation which extends westward to Fond du Lac and Chicago, a distance of about fourteen hundred miles, embracing the largest extent of inland water communication in the world. The following table exhibits this in a condensed form :—

	Length in miles.	Breadth in miles.	Depth in feet.	Elevation over sea.	Area, square miles.
Lake Superior	420	120	600	600	32,100
" Michigan	320	70	1000	573	21,900
" Huron	270	145	350	578	18,750
" St. Clair	25	18	20	570	300
" Erie	250	45	70	564	9,300
" Ontario	190	40	500	234	7,300
River St. Lawrence	700	...	...	...	...

CANALS.

	Length in Miles.	Depth.	Size of Locks.	Lockage.	No. Locks.
Lachine	8½	10	200 x 45	44¾	5
Beauharnois	11¼	10	200 x 45	82½	9
Cornwall	11½	10	200 x 55	48	7
Farrand's Point	9¾	10	200 x 45	4	1
Rapid Plat		10	200 x 45	11½	2
Point Iroquois		10	200 x 45	6	1
Galops		10	200 x 45	8	2
Welland	28	10	150 x 26½	330	27

Here the Ocean Steamers connect with the fleets of Lake and River craft, and thus contribute to make this City a great central depot for imports and exports.

The Lachine Canal, the first in the link, extends from Montreal to Lachine, cuts across the Southern point of the Island of Montreal, and avoids the Lachine rapids. The Beauharnois Canal extends from the village of Beauharnois to Hungry Bay, and passes the rapids of the Cascades, Cedars and Coteau. The Cornwall Canal, commencing at Cornwall and ending at Dickinson's Landing, passes the Long Sault rapid. Farrand's Point, Rapid Plat, Point Iroquois and Galops Rapid canals are short detached canals. The Welland connects Port Dalhousie, on Lake Ontario, with Port Colborne in Lake Erie, and surmounts the difficulties interposed by Niagara. Mr. Andrews, in his report already quoted (1852,) speaks of these canals as surpassing in magnitude and importance those of any other country. They have been constructed under the direction of Scientific Engineers with great care, and in the most substantial manner, so that a "break" or any interruption is of rare occurrence. The level of the St. Lawrence, unlike that of the Mississippi and other western rivers, varies but little, and a constant supply of water is

obtained from the vast volume collected in the basins of the Lakes which flows steadily onward to the ocean.

Vessels and Steamers passing westward, avail themselves of these canals to avoid the rapids, as also do heavily laden vessels tending eastward, but the mail steamers freighted with passengers, regularly run through all the rapids with ease and safety. The Government have caused the several channels to be explored, and they are now laid down on charts for the guidance of navigators.

Passage is thus afforded from the western Lakes to the Atlantic for vessels drawing ten feet of water, and suited to the capacity of the locks. A canal connecting the St. Lawrence with Lake Champlain and the head waters of the Hudson, debouches at Sorel, about forty miles below Montreal. It is named the Chambly canal, has 10 locks, and extending 11½ miles, equalizes the difference between the level of the Richelieu River and Lake Champlain, by a lockage of 79 feet. This vast canal system which centres at Montreal, is in keeping with the mighty stream and Lakes to which it is accessary. In a westward course from our City, the Lakes Ontario, Erie, St. Clair, Huron, Michigan and Superior, are traversed, one Inland Sea succeeding another.

Even now, in its infancy, the favored portion of the earth watered by these Lakes, is teeming with the products of its great fertility, its seas are alive with vessels, and an energetic race pour into it in myriads. This is its beginning, who can foresee its future? To these completed canals others are designed to be added.

Among the projected canals, are the following, the Georgian Bay Canal, connecting Lake Huron at Collingwood with Lake Ontario at Toronto. The Ottawa Canal, joining the waters of Lake Huron with the Ottawa River, which empties itself into the St. Lawrence at Montreal. In this project the city of Montreal has a peculiar interest, for the Ottawa country is the back country proper of the city. The Michigan Canal, crossing the base of the Peninsula of Michigan, taking advantage of the Kalamazoo and Raisin River, and avoiding the St. Clair flats. All these canals will materially shorten the water communication and benefit our Sea Port. They will be rivals it is true, but only so for the general welfare. All may open their channels, and the Erie Canal may increase her capacity, but all combined cannot satisfy the demands that will be made on them. Consider the vast territory yet unoccupied, but which in a few years will teem with its millions of producing and consuming inhabitants, and judge if this be an over estimate.

The time required to pass by propeller from Montreal to Chicago, and *vice versa*, has averaged ten days this season, although the trip has been made to and fro, (calling at the Lake Ports) in eighteen days. With an improved class of vessels, and with the distance saved by the projected canals, who can doubt but that the average voyage will yet be four days.

The rates of freight between Chicago and Montreal this year, have averaged for wheat 20 *cents*, and for flour 75 *cents*. The vessels which navigate these waters carry about 10 barrels of flour, 37 bushels of wheat, and 40 bushels of corn per ton. The certainty of means of transport, that will be induced to Montreal by the steady supply of freight, will make the rates of carriage for imports and exports less than they are at present here, and lower than they will be at New York or elsewhere.

European emigrants too seeking a home and an independence in the west, and attracted here by our Ocean Steamers, will see the superiority of an uninterrupted water communication from their old home to their new one.

The advantages of the Canadian Ocean route are, as we have said, very great, as will be apparent from the ensuing statements:—The principal point to which

produce is sent from the United States and Canada is Liverpool. The shortest way of reaching it, even from New York, is round the North end of Ireland. Yet New York is between the 40th and 41st parallel, and the Island of Tory, off the North point of Ireland is about 55 deg. north. One would think it much shorter to go by Cape Clear, at the south end of Ireland, which is between 51 and 52 deg. north latitude. But this is not the case. So much is gained by running to and across the northern compressed longitudes, that the distance from New York to Liverpool by the north end of Ireland is 2980, and by the south end 3013 miles. New Yorkers are obliged then to run in any case 11 degrees north to get to Liverpool, and find it to their advantage to run up 3° 30' more. Keeping these things in view, if any one will take a globe or map of the world, he will see that the St. Lawrence and Lakes Ontario and Erie have been so laid down by nature as to form one end of the arc of a great sailing circle, the other extremity resting upon the North of Ireland. We have already found the distance between New York and Liverpool by the shortest route to be 2980 miles. The distance from Montreal to Liverpool by the St. Lawrence route is 2750 to 2760 miles. Oswego is by this route considerably nearer Liverpool than New York by the nearest possible route. Suppose goods to be afloat on Lake Ontario off Oswego seeking the European market. If sent *viâ* New York they would require to be transhipped to go—

210 miles by a Canal,
150 " by River,
and 2980 " by Sea, after a second transhipment.

3340 miles in all.

If sent *viâ* Montreal, they may go entirely without transhipment—

30 miles by Canal,
1072 " by River and Gulf,
1878 " by Sea.

2980

Or they may go with a single transhipment at Montreal. A saving by the latter route is effected, it will be seen, of 360 miles, or the whole distance from Oswego to New York. But this by no means shows the case so strongly as it should be put,—for the navigation by 210 miles of small canal to Albany is much more tedious than the river navigation to Montreal with only 30 miles of a larger canal. Or take the case from Buffalo. A cargo is transhipped there to be sent through 360 miles of canal to Albany, there again to be transhipped or towed down the river to New York and transhipped there. Here is—

360 miles Canal,
150 " River,
2980 " Sea.

3490—say 3500 miles.

By the St. Lawrence route :—

380 miles Lake and River to Montreal,
70 " Canal,
885 " River and Gulf,
1878 " Sea.

Total distance, 3213 miles.

Shewing a gain *vid* the St. Lawrence of between 275 and 300 miles. When a vessel has reached the eastern end of Lake Erie with a cargo of western produce, therefore, it may save one or two transhipments and about 290 miles in distance, and that of tedious canal navigation, by coming on to Montreal and transhipping here; or the same distance and two or three transhipments by sailing straight on *vid* the St. Lawrence to Liverpool. If, on approaching the eastern end of Lake Ontario, she comes on to Montreal instead of turning into Oswego, her cargo will be saved the same number of transhipments and 360 miles of sailing—out of which there will be a gain of 180 miles of canal navigation.

With such advantages to Montreal and our Province, judge for yourselves of her prospects, and say whether we, her citizens, have not reason to look forward to a brilliant future.

It may be interesting to give in this place a few particulars of the scenery of the St. Lawrence route, which, in addition to shorter distance and smooth water nearly one-third of the way, gives it advantages of no mean kind for passengers and tourists, who now in such large numbers visit the new world. The traveller from Europe after losing sight of land on the north of Ireland, again comes in sight of land at Belle Isle, on the coast of America, in five or six days steaming; and afterwards he sails within sight of the land during the remainder of his journey to Montreal. The appearance of Belle Isle is bold, cold and inhospitable; and the same remark may be made of portions of the Labrador coast, the Island of Newfoundland, and to a certain extent of the Island of Anticosti, which come, in turns, into view. The Straits of Belle Isle are quite narrow, and in sailing through them, both shores are seen at once. The only human habitations visible are the fishing settlements on the Labrador coast. Anchored in their vicinity a considerable number of vessels of various sizes are seen. After steaming through the Gulf, and entering the mouth of the River, the eye can scarce take in its gigantic dimensions, but by and bye, as the traveller still steams along, the banks on both sides become distinctly visible. They are for the most part high, bold, and wooded. The mouth of the Saguenay, one of the most wonderful rivers in the world, making its deep and silent way in a fissure between mountains, is now passed; but ere the traveller reaches this he has noted the white houses and barns of the Canadian farmers smiling peacefully on both banks of the St. Lawrence. Villages now begin to make their appearance on both sides; and indeed the houses form a continuous street for the remainder of the journey. At every short distance there is a village church, white-washed or white painted like the houses, and with shining tin roofs; on a fine day, they fairly glisten in the sun. If we add to this the gigantic dimensions of the noble river, with its mountain banks, and see the whole when our Canadian sky assumes its own blue hue, the traveller will pronounce the scene to be one of magnificent beauty. Mr. McGregor thus speaks of it: "This river and the "whole country unfold scenery, the magnificence of which with the most delightful "physical beauty, is unequalled in America and perhaps in any other part of the world."

RAILWAYS.

Such as we have stated them are the facilities possessed by Montreal as regards water communication. Icy winter, however, locks up these for some months, and during this season of the year, speedy communication with the various sections of the province, and an outlet to the ocean, was felt to be an imperative necessity, and Canadian and British capital have supplied this important desideratum. A great chain of Railways now links the East with the West, but space is only at our disposal to review those lines with which Montreal directly connects. The first claiming notice in order of time is,

THE CHAMPLAIN AND ST. LAWRENCE RAILROAD,

Which is constructed between the St. Lawrence at St. Lambert or South Montreal and Rouse's Point on Lake Champlain.

It was chartered from Laprairie to St. Johns, in..... 1831
And commenced in..... 1835
Was open for traffic in..... 1836
The Charter authorising an extension from St. Johns to Rouse's Point, and the Branch to St. Lambert was granted in,..... 1851
It was opened for traffic throughout in..... 1852
Its total length, including the Laprairie Branch is 49 miles, and the cost of road, wharves, stations and equipment, amounted to..... £381,195

This, the oldest Railroad in Canada, connects at Rouse's Point with the Vermont and Canada Railroad, and with all the lines of Railroad to Boston, New York and all parts of the New England States, and also with the Ogdensburgh Railroad and with the Lake Champlain steamers, thus affording the greatest facilities for communication with New York, Boston, Albany, Troy, Rochester, Buffalo, Niagara Falls, Canada West, and the Western States, and being a direct and uninterrupted railroad route to the cities above named.

Goods are conveyed between Montreal and Boston, New York and intermediate places without transhipment, and by this route passengers reach Boston in 13 hours, New York in 15 hours, Buffalo in 24 hours, and Chicago in 48 hours.

The next road claiming notice, in the order of seniority, is

THE MONTREAL AND NEW YORK RAILROAD,

Which comprises—

Firstly,—The Lachine Division, extending from Montreal to Lachine, a distance of 8 miles.

It was commenced in.....1846
And opened for traffic in.....1847

A prominent feature in this Road is the

Steam Ferry, between Lachine and Caughnawaga, running directly across the St. Lawrence, a distance of about three-fourths of a mile, but which is increased by the course of the Navigation to nearly 2 miles.

This, it may be remembered by the way, is the only *Steam Ferry* in Canada East, which is open every day in the year. The crossing is made with a powerful steamer, which has been built with a Railroad track on its deck for the purpose of connecting the two divisions of the Montreal and New York Railroad without breaking bulk. The Iroquois crosses the St. Lawrence with a locomotive and tender, and three loaded Cars at one time, and this work it is capable of repeating every fifteen minutes, if necessity requires it.

And, secondly,—the Caughnawaga Division, extending from Caughnawaga to the Province Line, a distance of 29 miles.

It was commenced in.....1851
And opened for traffic in.....1852

The total length of the Montreal and New York Railroad, including the Ferry (of say 2 miles) is 39 miles, and its *cost*, including superstructure, locomotives, cars, buildings, steamer, wharves, ferry slips, extra land, and general equipment was £238,229 2s. 9d. currency.

Its connections are, firstly, with the various steamers at Lachine; and 2ndly, with the Plattsburgh and Montreal Railroad at the Province Line to Plattsburgh, a distance of 23 miles, making in all, 62 miles from Montreal. It crosses and connects with the Ogdensburgh Railroad at Mooer's Junction for Ogdensburgh, and then with steamers for the West, as also at Potsdam on the Ogdensburgh Line, with the Potsdam and Watertown Railroad, thus forming a continuous line on the south shore of Lake Ontario. It connects also eastward with Rouse's Point, and thence *viâ* the Vermont and Canada Railroad, &c., at Plattsburgh, by steam direct with Burlington and Whitehall, &c., &c.; at either of which points it connects with the various American Railroads leading to Boston, New York, Troy, Albany, Schenectady, and the West.

The advantages of this Railway are its unequalled Steam Ferry, the fact of there being no dust, from its being ballasted with heavy gravel; the speed that can be attained from its direct course and easy grades, and also the comfort afforded by steady cars, owing to the use of superior iron. It is in fact equal to a continuous rail, and lands passengers in the City itself.

This Line forms part of the nearest direct railway route from Montreal to New York, and is, it is stated, the nearest practicable air line. When the remaining link from Plattsburgh to Whitehall shall be completed, the route may be then easily travelled between the two cities in ten hours.

The Montreal and New York Railroad offers the advantage for Freight, of the avoidance of the necessity of twice handling previous to delivery. This road has, from a series of unfortunate circumstances, been prevented from obtaining that share of public patronage which its positive advantages would entitle it to; but notwithstanding the consequent want of through business from which it has suffered hitherto, it is gratifying to state that the road has more than paid all its working expenses from the local business alone, thus clearly establishing the fact that with any ordinary amount of through business, the road would give fair returns upon the capital invested in its construction.

We now come to that great undertaking, whose opening is this day being celebrated.

THE GRAND TRUNK RAILWAY.

In the fall of 1852, the Grand Trunk Railway scheme was fairly launched into existence, and embraced in its ramifications, the construction of a continuous line of Railway from Trois Pistoles, about 150 miles below Quebec, on the southern side of the River St. Lawrence, the point at which a junction with the proposed Halifax Railway is looked forward to,—and Port Sarnia on Lake Huron, a distance of upward of 800 miles,—also a branch line of 50 miles in length, from Belleville to Peterborough,—and the leasing of the Railroad then already built between Montreal and Portland, so that the products of the western points of the Province might be conveyed through Canada to the Atlantic seaboard, without break of guage or bulk. The total length of unbroken Railway communication which will thus be obtained, when the St. Lawrence River is spanned by the Victoria Bridge, a structure unequalled in the history of engineering, either in size or in massive proportions,—is upwards of eleven hundred miles. The original capital of the Company was £9,500,000, but this being found insufficient, it has been determined to increase this amount to £12,000,000 sterling, or $60,000,000. Of this sum the Province has an interest in the undertaking in the shape of a guarantee, to an amount of upwards of £3,000,000 sterling, or $15,000,000. Of the works proposed, however, it was found necessary from several causes, to place in abeyance the prosecution of three different

sections of the work, viz: the distance between St. Thomas to Trois Pistoles, 100 miles; from Belleville to Peterborough, 50 miles; and from St. Mary's to Sarnia, 68 miles. But these sections will doubtless ere long, be proceeded with; in the first case, because the Lower Provinces in all probability, assisted by the Imperial Government, will complete their Railway communication to Trois Pistoles, in order to connect it with the Canadian railway system; and in the two latter cases, simply because the traffic of the country will very speedily demand the construction of these lines.

With these curtailments, and they are but temporary, the Grand Trunk Railway is now composed of the following sections, viz:—

Montreal to Portland	292 miles.
Richmond to Point Levi, opposite Quebec, St. Thomas	137 "
Montreal to Toronto	333 "
Toronto to Stratford	88 "
Making a total mileage of	850 " of, (when

the Victoria Bridge is completed,) an unbroken Railway communication.

It is understood that the Victoria Bridge will be completed in the fall of 1859, or early in 1860. The cost of this structure was originally estimated at £1,450,000, but this sum has since been reduced, and the present calculation of its probable cost is about £1,250,000. It is supposed that in its erection 250,000 tons of stone and 7,500 tons of iron have been used. The iron superstructure is supported on 24 piers and two abutments. The centre span being 330 feet, there are 12 spans on each side of the centre, 242 feet each. The length of the abutments is 242 feet each. The extreme length including abutments is 7000 feet. The height above summer water level in the centre opening is 60 feet, descending to either end at the rate of 1 in 130. The contents of the masonry will be three millions of cubic feet. The weight of iron in the tubes 8000 tons. The following are the dimensions of tube through which the trains pass in the middle span, viz: 22 feet high, 16 feet wide; at the extreme ends 19 feet high, 16 feet wide. The total length from River bank to River bank will be 10,284 feet, or about 50 yards less than two English miles. This gigantic structure is in progress, and when in successful operation will prove a world's wonder.

The works throughout the whole of this great length of line, have been pronounced by competent authorities, both English and American, to be altogether unequalled by any Railway on this continent, and reflect much credit, not only on the Engineer of the Company, but also on the several Agents of the Contractors, Messrs. Peto, Brassey, Betts & Co., who have conducted them to so successful a completion. On an average there is a station to every six miles, 2 men to every 3 miles, and a locomotive to every 4 miles.

The average running time between Montreal and Toronto, next season, will be about eleven hours, and from Montreal to Portland about ten hours, and from Montreal to Quebec five hours; so that the journey between Montreal and Chicago can be easily accomplished in a day and a-half!

Apart from the through travel between the East and the West, which must be very large, the junctions between other Railways and the Grand Trunk Railway throughout the Province are very numerous, and will provide a heavy traffic. They are as follows:—

Starting from Montreal, a line is to run to Ottawa City, 120 miles in length. There have been opened 12 miles from Grenville to Carillon, but the rest of the works have for some time been stopped. And about 25 miles west of Montreal at Vaudreuil, it is

proposed to run a line on the south bank of the Ottawa to that City, bearing its name, and thence in a westerly direction to Lake Huron. These lines in all probability will become a part of the North Shore Railway Scheme, which is designed to run from the North East of Lake Huron to Quebec *viâ* Ottawa City and Montreal, for the accomplishment of which the Provincial Legislature, in its last session, voted 4,000,000 of acres of wild lands.

At *Prescott*, 112 miles from Montreal, it connects with the Ottawa and Prescott Railway 50 miles in length to Ottawa City, affording by the junction there, the benefit of a continuous Railway connection from east and west thereto.

At *Brockville*, 12 miles west of Prescott, with the Perth, Ottawa and Pembroke Railroad. This line about 120 miles long, will be completely opened, it is expected in about two years from the present time.

At *Belleville*, with the Grand Trunk Branch, of 50 miles in length to Peterborough. The works on this line are however delayed for the present.

At *Cobourg*, with the Cobourg and Peterborough Railway, 28 miles in length to the Town of Peterborough.

At *Port Hope*, with the Port Hope and Lindsay Railway, 36 miles in length.

At *Toronto*, with the Ontario, Simcoe and Huron Railroad, to Barrie and Collingwood, 94 miles. From Collingwood, five steamers ply regularly between Chicago and that port, and arrangements are now making for a regular line of propellers between the two places, calling at intermediate ports on Lake Michigan, and also at Toronto with the Toronto and Hamilton branch of the Great Western Railway to Hamilton.

At *Guelph*, with the Galt and Guelph branch of the Great Western Railway.

At *Stratford*, with the Buffalo, Brantford and Goderich Railway, from which line the Grand Trunk will collect at this point, all the traffic intended for Canada and Portland, from Lakes Huron and Superior. This road it is expected will be in full operation early next year.

At *St. Mary's*, with a branch to London in the Great Western Railway, connecting at that station with that Company's line to Sarnia and Detroit.

The Grand Trunk Railway Company have completed arrangements whereby passengers and goods can be booked through from all points in Europe to any place along the lines of the Grand Trunk and Great Western Railways, and the Railways connecting with them to the Valley of the Mississippi, and in fact to all the chief places on this Continent. By making one payment in Britain, tickets will be issued for any of these places. No further charges will be incurred for passing goods at Portland or Quebec, but a fee of 2s. 6d. per package. Especial arrangements have been made for emigrants, so that tickets for extra baggage and all other charges can be had from the place of departure to the place of destination. These important changes which will beyond all doubt divert the travel from Europe to the Great West from New York and other American ports to the St. Lawrence river, will be in full operation next year. Thus enabling the emigrant to be conveyed without change of carriage from Quebec to Detroit, if the place of destination be further West than that point. The cars will be conveyed across the St. Lawrence between Longueuil and Montreal in the steamer, until the Victoria bridge is finished, and will then afford to the emigrant the cheapest, speediest, as well as the most direct route to the West.

From this brief sketch of the Grand Provincial Railway of Canada and its extended connections, comprising a total length of nearly 1500 miles now in operation, it will be seen, that this Province can compare very favorably, the difference of population being

considered, with any of the most flourishing States in the adjoining Republic; and if, as Washington has observed, it is an object of legislative concern and highly beneficial to the country, to give every facility to the means of travelling for strangers and of intercourse for citizens, the people of this Province will never have cause to regret their having assisted the Grand Trunk Railway to the successful completion, which they have now in such numbers met in this city to celebrate, at the invitation of our merchants and other citizens.

TELEGRAPH LINES.

In addition to such great Railway and Canal facilities, the City of Montreal is possessed of those valuable business advantages, which extensive lines of Telegraph afford. The use of the Telegraph in Canada is a matter of daily convenience, and is taken advantage of, by the Canadian community to a much wider extent than is the case in Britain, a result in some degree produced by the price of the rates charged for Telegraphic communication, which is very reasonable.

The first of these Lines of Telegraph which claims notice, from the magnitude of its operations is—

The Montreal Telegraph Company, which was organized in January, 1847, with a capital of £15,000. The Line was opened for public business between Quebec and Toronto (a distance of 540 miles) in October, 1847; there then being 9 officers and 35 persons employed by the Company in its service. The Company have since greatly extended its business as well as its connections, &c.

The Capital Stock is now £70,000, and the number of its officers 124, and that of the persons employed 326. There are of its Telegraphic Line in operation 2,783 miles, and in course of erection 148 more. The main line extends from Woodstock, in the Province of New Brunswick, along the Queen's highway, *viâ* Quebec to Montreal, and from Montreal on the line of the Grand Trunk Railway to Toronto, and thence along the Great Western Railway, through Hamilton and London to Windsor,

a distance of in all,..	1100 Miles.
Besides the main line, the Company own also an independent line from Quebec to Buffalo, on the principal highway, extending over a distance of	660 "
And also the following branches :—	
From Quebec to Richmond..	96 "
" Lanoraie to Sorel	10 "
" Montreal to Portland..	292 "
" Montreal to the Province Line and Rouse's Point ..	71 "
" Montreal to Ottawa and Ogdensburgh	120 "
" Prescott to Ottawa and Ogdensburgh..	55 "
" Belleville to Stirling	15 "
" Cobourg to Peterborough	27 "
" Toronto to St. Mary's..	101 "
" Toronto to Buffalo	125 "
" Niagara to Chippawa..	18 "
" Harrisburg to Galt	12 "
" Brantford to Port Dover	32 "
" London to Port Stanley	27 "
" Windsor to Amherstburg	18 "
	—— 2779 Miles.
And the Submarine Line	4 "
	Making a total of.... 2783 Miles.

These lines form a direct connection and communication with the Provinces of New Brunswick and Nova Scotia by way of Woodstock and Portland; with Boston by Portland and Rutland; with New York by Troy and Boston; with Cleveland and Cincinnati by Buffalo, and with Chicago, Milwaukie and the West, by Windsor and Detroit. The business of the Company has wonderfully extended; and, as already stated, the telegraph is used daily by all classes of the community, taking frequently, to a great extent, the place of postal communications. For several years, there was no record kept of the number of messages transmitted over the line. In 1852, the paid messages (exclusive of newspaper reports) sent over the main line amounted to 80,939; in 1853, to 121,434; in 1854, to 175,000; in 1855, to 250,460. The statistics for 1856, have not yet been made up, but there is every reason to believe from the business already transacted, that the number of messages transmitted over the whole lines for the year will fall very little short of 500,000. The number of messages, passing through the office in Montreal during the month of October, 1856, averaged 750 a day, exclusive of reports of English News, and the daily New York Markets, and other reports which are furnished to the Press of the city.

The Montreal and New York, House's Printing Telegraph Company extends from the City of Montreal, crossing the River St. Lawrence, by means of masts and wires, by a span of three thousand feet, to the Province line, there connecting with the New York and Canada Telegraph line, comprising in all thirty-four miles to the Province line, and two hundred to Troy, from thence having a direct and immediate communication with New York. The American portion of this line is in active operation, and the Canadian section has been completed, and is ready for working.

This line will afford to the business men of Montreal the means of communication with the following places, viz:—Mooer's Junction, Plattsburg, Keeseville, Port Henry, Whitehall, Fort Edward, Saratoga, Mechanicsville, Troy and New York.

The International Telegraph Line, (formerly the Canada Grand Trunk,) comprises 750 miles of line, and over 50 offices, and extends from Montreal through Western Canada, connecting with Buffalo. Branch lines communicate with Guelph, Collingwood, Peterboro' and Picton.

THE MANUFACTURES OF MONTREAL.

It has been already pointed out in that portion of this pamphlet in which the commerce of Montreal is treated of, that a manufacturing should also be a commercial city, or have easy access to a seaport. As we have seen, Montreal possesses this advantage for manufacturing in an eminent degree. She possesses also within the city and in its immediate vicinity unlimited water power. Besides that furnished by the Lachine canal, the Lachine rapids offer numerous mill sites of which no use has as yet been made. It has been proposed also, though objections have been raised to the scheme, to make use of the waste water flowing from the great Aqueduct of the new water works for manufacturing purposes. A large number of factories might be furnished with motive power from this source. Another advantage Montreal possesses, is found in the density of the population of the surrounding districts. In many places the land has been subdivided until the holdings of each man are too small for profitable agriculture, and the people, deeply attached to the soil, are unwilling to leave the older settlements in the valleys of the St. Lawrence and Richelieu so long as they can obtain subsistence there. Some, indeed, have wandered off to the prairie lands of the West and to the Eastern townships; and some have sought and obtained employment in the factories of New England,

whence we may hope to see them come back to our own factories already trained to this new industry. No where are there found people better adapted for factory hands, more intelligent, docile, and giving less trouble to their employers, than in Lower Canada. Twenty or twenty-five years ago this population was most prosperous in agricultural pursuits; large crops of wheat were grown here, and a considerable surplus exported. The fly came, the wheat crops ceased, and the surplus for export of the coarser grains which have since been grown, has proved less remunerative. These coarse grains, roots, and all those other crops which find a most profitable market in large cities, are grown here in great abundance. The supplies of all these necessaries for a manufacturing population can be drawn from the immediate vicinity of the city. The island of Montreal now exports, from year to year, considerable quantities of them to other parts of the Province. Owing to the causes above alluded to, agricultural wages are not so high here as in those portions of the Province where wheat is more largely grown, and hands can be obtained to work in the factories at more reasonable rates than there. All these causes concurring make this the best site for a manufacturing city in Canada, perhaps the best on this Continent. Materials required from abroad can be brought here without transhipment.* Numerous beds of iron ore exist within easy distance for carriage hither by water. The Hull mines on the Ottawa, not far from the City of Ottawa, are now worked, and the iron from the St. Maurice mines near Three Rivers has long been manufactured. Both irons are of the most excellent description. Here we have abundant water-power, and cheap and abundant labor. The same appliances and facilities also which have been elsewhere described for the distribution of imported goods to consumers in the West, will be of as great assistance to our manufacturers, some of whom already feel the benefit of the opening of the Grand Trunk Railway in the increase of Western orders. The sole difficulties with which they have to contend are a restricted market, and the competition of the larger, wealthier, and longer established factories in other countries. The mode of removing these difficulties has of late occupied a good deal of public attention; but as the Committee deem it to be within the scope of the duties assigned to them to state facts only, not to suggest remedies, they do not enter upon any consideration of this subject.

There is this in favor of Montreal manufactures, that they have been established and grown up to their present position without the aid of high protective duties. The tariff has never been made highly protective, though a moderate incidental protection has been afforded them by discriminating between the raw materials for manufactures, and the manufactures themselves, admitting the former nearly or altogether free of duty, and laying a moderate duty on the latter. There can be no doubt, therefore, that they are established upon a sound basis, and are of a healthy growth.

The Committee had intended to lay before the visitors to Montreal, on the occasion of the Railway Celebration, a full account of its Manufactures. It has been found impossible, however, within the time given them for the purpose, to make their account complete. They are unwilling, nevertheless, to pass them by altogether unnoticed, and therefore subjoin some description of the extent and operations of several of the more important. The information furnished them refers principally to the Factories at the Canal. Information has been received from only a few of the numerous, and, in many instances,

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* Cotton, too, can be brought here from the more northern cotton growing States more cheaply and safely by our system of inland navigation than by the coasting route, or by rail to Boston, for the New England Factories. We have already cited an instance of cotton brought from Tennessee by this route for New York.

extensive Factories in town, and that received has been generally of a very meagre description. It has been found, therefore, quite impossible to make up aggregates, as the Committee had desired, shewing at one glance the total amount of capital invested and of manufactures produced per annum. Enough, however, is set forth below to shew that Montreal may fairly lay claim to the character of a manufacturing as well as of a commercial city.

For several years the surplus waters of the Lachine Canal were allowed to run to waste, no advantage being taken of the facilities for manufacture afforded by the power there created. In 1843, while the St. Lawrence Canals were in course of construction, and the Lachine Canal being enlarged, Mr. Ira Gould first visited Montreal. He had an interview with Mr. Barrett, then Engineer in charge, respecting the water-powers to be created, and from that interview arose the plan of applying them to manufacturing purposes. In November, 1846, the Commissioners of Public Works, (the Hon. W. B. Robinson, then being Chief Commissioner,) offered a number of mill sites on the canal and river bank, inside the upper basin, for lease at public competition. The rent obtained was $400 per annum, for each lot, and water for four runs of stones. Mr. Gould, among others, took a lot, and built there a flouring establishment. Hitherto, all the grain ground in the city had been ground by wind or steam mills, one of the former clumsy contrivances having been in use as late as 1845 or 1846. The Factories now established on that site are two flouring establishments, with 16 runs of stones, three spike and nail factories, two foundries, with extensive engine and boiler works, one establishment for making saws, two saw mills, and one paint, oil and drug mill. Subsequently, the water power at the lock next above this basin, known as the St. Gabriel Lock, was leased. The whole of it was originally taken by two individuals, and has been sub-leased by them to others, to the extent of water for 100 runs of stones. Among the works here, are, foundries, engine and boiler works, a ship yard and marine works, saw mills, sash, blind and door factories, stave and barrel works, a flour mill, an oatmeal and corn mill, cotton mills, an edged tool factory, India rubber factory, a factory of woollens, a large rope and cordage factory, with other smaller establishments. These works, with those on the lower basin, are using a power daily equal to that of 3500 horses, all of these establishments having sprung into existence since 1847. They furnish employment for more than 2000 men, independently of the commercial men engaged in furnishing materials from abroad. Taking the usual average of a family at five, subsistence would thus seem to be afforded to 10,000 persons by these factories, and there is no doubt that the population of that end of the town has been increased to even a greater extent since their establishment. Few instances of more rapid development can be found, we fancy, even among the rapidly growing manufacturing cities of the neighboring Union.

But the growth of our manufacturing suburb has not stopped there. Pushing still further on, to Côte St. Paul, just outside the city limits, where they escape city taxation, some new establishments have been planted during the last and the present season. A property there having a frontage of 3400 feet upon the Lachine Canal, and containing altogether about 110 arpents of land and extensive water power, was purchased about four years ago, by Mr. Parkyn, Engineer, of this city, with a view of connecting, with manufacturing operations, a dry and wet dock for repairing and building vessels. Finding it impossible, in consequence of the interference of the line of canal of the new Water Works, to carry out the plan of docks originally intended, he has been compelled for a time to abandon it, but has continued his manufacturing operations with a most praiseworthy zeal, and has now executed a splendid head race of about 2000 feet

in length and 44 feet wide, at a cost of £2000. He has also erected the following works now in operation :—

A Grist Mill with 4 run of stones,	cost	£2000
Axe Factory,	cost	1500
Saw Mills,	"	3000
Three Dwelling Houses,	"	600

The discharge to this power is about 12,000 inches, with 9 feet 4 inches fall, and it is capable of driving four times the present machinery. About 100 men and 8 horses are employed on these works, and there is paid out in wages about a thousand dollars per week.

The Grist Mill is capable of grinding 500 bushels per day.

The Axe Factory is leased by J. J. Higgins, and turns out about 3000 dozen per annum, and is capable of extending to 5000 dozen. The Shovel Factory is leased by J. J. Higgins also, and is capable of producing 25 dozen per day.

The Nail Factory is leased by P. & J. Dunn, and manufactures about 750 tons per annum, and could be increased to 1200 tons per annum.

The Saw Mill is leased by Alex. Cowan, and when fully completed, can produce a million feet per month.

The shovels, axes and tools manufactured at these works are very superior, and at the late Paris Exhibition they drew Prize Medals.

The Nail Machines turn out excellent work; the nails obtained honorable mention at the late Paris Exhibition.

THE FACTORIES AT THE ST. GABRIEL LOCK.

India Rubber.—One of the first factories established at the St. Gabriel Locks was that of the Montreal India Rubber Company, in the beginning of 1854. They occupy a building there 180 feet long by 40 wide, with an addition 40 feet square; the main building having four stories beside the basement, the addition only two stories; all erected at a cost of £9402 besides land. They use 40 horse power of water to propel their machinery, which cost £7616. They are manufacturing 1000 pairs of rubber shoes per day now, and could double their production. They employ 110 hands, to whom they pay £600 monthly. These manufactures are sold to all parts of Canada, and some we believe have been exported to Europe.

At the other end of the City is the Canada Rubber Factory, of which Messrs. Brown, Hibbard, Bourn & Co., are proprietors. They manufacture not only shoes and boots, but car springs, hose, belting and packing. It was established in 1853. The establishment consists of,

One building	175	feet	long,	40	feet	wide, 3	stories high,
"	145	"		30	"	2	"
"	70	"		30	"	2	"
"	40	"		30	"	1	"
One stone building	50	"		40	"	2	"

all brick, and

The machinery is propelled by a low pressure beam steam engine, 18 inch cylinder. They manufacture at present 1500 pairs of shoes and boots, about 1500 feet of belting and hose, 1000 lbs. of car springs and steam engine packing per diem, all of which could be doubled with the present facilities. They employ 158 persons, to whom they pay about £1000 monthly. The cost of land and buildings was about £13,880, and of the machinery £8000.

Sugar Refinery.—The largest Factory of Montreal is the Sugar Refinery, set in operation in January last year by Mr. Redpath. Its large pile and tall chimney are visible a long way off from the City. The principal building is of stone and brick, seven stories high, the whole of the floors comprising an area of 11,766 square yards. Besides this there are two brick warehouses attached, affording storage for 8,000 brls. of refined sugar and 2500 hhds. raw sugar. There is also attached a range of brick buildings, 236 feet in length and two stories high, containing the gas house, the bone house, blacksmith's, carpenter's, machinist's and cooper's shops and stable, cost £45,000. The machinery is propelled by a steam engine of 50 horse-power, the boilers being equal to 150 horse-power. 100 men are employed upon the premises, but a good deal of work is done elsewhere. The wages amount to £8000 per annum, the total expenses of the establishment being £2200 per month. The present product is about 3000 barrels of refined sugar per month, and the production could easily be doubled if the demand required it. It is all sold in Canada. This Factory is the first and as yet the only one of the kind in the Province.

Cotton.—In 1853, Mr. F. W. Harris established a Factory of Cotton Cloth at the St. Gabriel Locks, and in 1855 added a batting and wadding mill. The first has an area of 50 by 70 feet, and 3 stories high, built at a cost of £1500. The machinery is of the best description, with the latest improvements for manufacturing cloths out of cotton as it comes from the plantation. It includes willows, pickers, carding and drawing machines, 1500 spindles, and 46 looms. Cost of machinery £6500. This factory is principally employed in the manufacture of seamless bags and denims. About 70 hands are employed here, nearly all women and children, whose wages amount to about £2000 per annum. The bags are very strong and serviceable, peculiarly fitted for heavy grains, &c. Mr. Chandler, Commissioner Street, is town agent for these bags. Of the denims and ticks, about 300 yards per diem are manufactured. Three times that quantity could be made in the factory. The denims are of the same weight and quality as the well known Amoskeag denims, finished without starch or other stiffening. The ticks are of the same quality, and have been sold here a penny per yard less than the same goods cost in Boston or New York. The batting and wadding factory is 100 feet long by 24 in width, and cost £3000. In it are used 13 carding, besides other machines. They can turn off here 6000 yards of wadding, and 1200 lbs. of batting per diem, which is rather more than the home market will take now. Mr. Dougall, St. Paul Street, is agent for these goods.

Mr. George W. Weaver, Woollen Cloth Manufacturer,—Was established in 1852, holds a brick building two stories high, and manufactures all for home consumption. Mr. Weaver's machinery, which is nearly complete, will manufacture 60,000 yards per annum.

Ropes and Cordage, &c.—In 1825, Mr. Converse established a rope walk at the eastern end of the City. Since the opening of the Factories at St. Gabriel Locks he has added a large establishment there. The old establishment upon Parthenais Street comprised a stone building of 40 by 60 feet, four stories high, and a wooden building, 20 by 1200 feet, of one story, with a steam engine of 20 horse-power; cost with the land £2500. This Factory is for the present idle. The new establishment at the St. Gabriel Locks consists of a head building of 60 by 84 feet, four stories high besides basement. The covered walk is 24 by 1200 feet. Mr. Converse also manufactures gypsum for agricultural purposes and calcined plaster. The machinery is propelled by three water wheels, consuming 1200 cubic inches of water, with a nine feet fall and about 80 horse power. Building, machinery and land cost £7500. 14 men, 10 girls and 18 boys are employed

here, receiving as wages £35 per month. The products of the Factory are valued at about £20,000 per annum, and they might be quintupled with trifling additional investment. The goods are all sold in Canada. The very best machinery is employed, and the manufactures, where they are known, compete favorably with any other.

Mr. C. T. Palsgrave's Type Foundry.—This establishment, which commenced in 1835, has 12 type-cutting machines, gives employment to 36 hands, and does a large business chiefly for the Canadian market. Mr. C. T. Palsgrave obtained a Prize Medal at the Great London Exhibition of 1851. He sells his type throughout the Province.

Mr. A. Cantin, (Montreal Marine Works,) Ship and Steamboat Builder, Engineer, &c.—This Firm was established in 1846, and employs, at present, from 200 to 250 hands, at monthly wages of £1050. The works, which are situated, a small part within the City and the remainder in the County of Montreal, cover a space of about 14 acres, with a frontage to the canal of about 800 feet, and contain two excellent basins. A continuous row of buildings occupies nearly the whole 800 feet of the opposite street front of the premises. The buildings are all substantially built of stone and brick, viz:—shipyard with draughting and modelling rooms, moulding loft, saw mills, &c., &c.; and the ground cost £6000. The machinery used in the saw mills, which contain upright and circular saws, is propelled by water power, equal to eighty horses. There is used here a Marine Railway, wrought by a direct acting high-pressure engine of 15 horse power, by which vessels of the largest class can be hauled out and repaired under water mark. In the Engineering Department there is another condensing beam engine, of 20 horse power, for driving the machinery, consisting of lathes, planes, and a great variety of other machines. The Canal is here 700 feet wide, and affords great facilities for vessels entering the basin, or for being placed on the Railway, as well as for the launching of new ones. Since the establishment of these works in 1846, more than 70 vessels have been built; and there were seven steamers built and engined last year, besides smaller vessels of different kinds. For the development of the superior water-communication of Canada, Mr. Cantin thinks the screw-propeller the best. This has been successfully proved in the case of two steamers now employed between Montreal and Chicago. Mr. Cantin's works, (as may be seen from the foregoing statements,) are admirably fitted for carrying on a most extensive business. Mr. Cantin's manufactures are wholly for use in Canada, Canadian built vessels not being admitted to register in the States, though those built in the States may be registered here.

Mr. John Ostell's Factory of Doors, Windows, and all kinds of Joiners Finishings,—Was established in 1852, holds several buildings, and about five acres of land, which cost £10,000; uses machinery of all kinds for wood-cutting, &c.; employs 75 hands, who receive annually £6000 wages. This Firm has a capital of about £20,000, and manufactures goods to the amount of about £18,750 yearly, one-half of which productions are for Lower Canada, the rest sent chiefly to the Upper Province, and a small quantity exported to the States, Australia, and Great Britain.*

* For two or three years previous to the passing of the Reciprocity Measures, the manufactures of wood here were very extensive and flourishing, and large quantities were exported. Mr. Ostell informs us that he shipped the products of his Factory in large quantities to New York, New Orleans, and other places in the United States. Messrs. Grant & Hall were also exporters of large quantities of manufactured lumber to the States. Then the duty was levied on both unmanufactured and manufactured lumber; now the unmanufactured being admitted into the States free, and the duty being still levied on the manufactured, the United States manufacturer is protected to the almost entire exclusion of the Canadian from that market.

Manufactures of Wood.—In 1854, Mr. James Shearer established, at the St. Gabriel Locks, a Factory where are made Doors, Sashes, Blinds, Mouldings, Architraves, &c., making machinery do very much of the work for the finishing of houses, steamboats, &c., which was previously done by hand. This Factory is 62 feet by 40, employing a large quantity of ingenious machinery, propelled by water, with power equal to 30 horses, and capable of being doubled. From 50 to 55 hands have been employed here constantly since the Factory was established. This establishment is capable of manufacturing daily 100 doors, 50 sashes, and 25 blinds, besides mouldings, architraves, and other finishings; or of preparing, in one month, the entire inner work of a first class passenger boat, with upper saloon, state-rooms, ladies' cabin, and lower cabin with berths.

Mr. William Allen, Chair Factory, St. Gabriel Locks,—Was established in 1852; occupies, at present, a two-story brick building, and employs 25 men, at 6s. per day. Mr. Allen's manufactures are chiefly for home consumption. His machinery, when completed, will be capable of turning out 500 chairs in the day, and the chairs he manufactures are fast superseding those of American manufacture.

Mr. McGauren,—Has a Saw Mill at St. Gabriel Locks, 90 feet by 50, with a large circular saw, and four small ones, propelled by water.

Mr. Wilsie Manning, Barrel Factory,—Was established in 1854, holds a one-story brick building, uses water-power machinery, which is very complete, employs 30 men, at 6s. 3d. per day each, and produces in the year 40,000 flour barrels, and 20,000 nail kegs, all for home consumption.

Axes, Edge Tools, &c.—In 1850, Mr. R. Scott established his Factory of Axes, Edged Tools, Augers, and light forgings, at the St. Gabriel Locks. Mr. Scott's buildings are three in number, one of 116 by 24 feet, one of 72 by 30 feet, and the third 56 by 40 feet, costing over £6000. A large quantity of machinery is employed, including five trip hammers, a forge hammer, grinding and polishing machines, self-acting and other lathes, boring machines, &c., &c., propelled by water, about 100 horse power, from five horizontal wheels. It is capable of profitable extension. When at full work it employs 70 men and 6 boys, who are paid from 3s. 4d. to 14s. per day. From 100 to 120 dozen a day can be manufactured at these works. They have heretofore been principally disposed of in this City and Quebec, but the demand from Canada West is increasing, and as these goods are saleable in bond at New York and Boston, it is believed that a trade in them might be established with those cities and even in Europe. Some of the goods manufactured here took a First Prize at the Paris Exhibition.*

Messrs. Redmonds & Co., General Foundry, 11 Gabriel Locks,—Were established in 1854, in the present site, which is a large two-story brick building. The machinery used by Messrs. Redmonds & Co. is water-power, and they employ 30 men, at an average of 6s. 3d. per day, and send out 300 tons castings in the year.

Wm. Burry & Co., St. Gabriel Locks, Foundry, &c.,—Was established in 1583; hold two-story brick buildings, use water-power machinery, employ 70 hands at 7s. 6d.

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* In furnishing us with these particulars, Mr. Scott also called attention to the fact that the material principally used here, and at a disadvantage, is English refined iron. He believes that no more profitable manufacture could be entered upon here than one of scrap and bloom iron. Ore and fuel are both more plentiful here than in New York and other States of the Union where this manufacture is carried on to a large extent, our ores being exported for their use. Most of the Engine and Railroad uses employed here are imported from the States. It would be well for our capitalists also to ascertain how far Mr. Bessemer's recent invention may be turned to account in smelting our own ores.

per day. About four-fifths of the manufactures of this Firm are annually exported. Messrs. Burry & Co. are about to enlarge their establishment so as to supply the increasing demands of their purchasers, which speaks well for the business.

Messrs. A. W. Ogilvie & Co.—Have a Custom Grist Mill here, established in 1852, in which they manufacture not only flour, but pot and pearl barley split peas, cracked wheat, Graham flour, Indian meal and *farine entière*. The building is of stone, three stories high, 70 feet by 36. It contains 5 pairs or runs of stones, 2 barley mills, and a pea splitting machine; cost about £2000, all driven by water, with 6 iron water wheels, having capacity for grinding 500 brls. wheat and 300 brls. coarse grain per day, and of preparing 150 brls. of barley, and splitting 150 brls. peas. About 20,000 qtls. *farine entière*, 8000 to 10,000 qtls. Indian Meal, 3500 to 4000 qtls. pot and pearl barley, and 1200 to 1500 qtls. split peas are produced annually, the *farine entière* and Indian meal being sold generally for home consumption, and of the barley and peas about one-third in Canada and two-thirds for the United States market heretofore. In June last, however, the United States Customs authorities refused longer to admit this barley under the Reciprocity Treaty, classed as breadstuffs, but have levied a duty of 25 per cent. upon it as a manufactured article.

FACTORIES ON THE CANAL BASIN.

City Flour Mills.—Mr. Gould built his Flouring Mill here in 1847. The Mill proper is 165 feet by 50, and five stories high. The storehouses attached, equal in capacity, a building of 240 feet by 60, and five stories high. They all cost £37,500 or $150,000. Twelve pairs of stones are employed, grinding 3500 to 4000 bushels of wheat, producing 700 to 800 barrels of flour each day. Including those engaged in preparing material and making barrels, this establishment employs 200 men, thus furnishing support to about 1000 persons. The amount paid yearly for labor alone is £7500 or $30,000. The capital constantly employed is about £50,000 or $200,000. The stock used yearly is valued at £187,500 or $750,000. The value of the manufactures produced, about £200,000 or $800,000. Very little of the flour is sold for home consumption, possibly one-eighth of the production; the greater part is exported to England, the Lower Provinces, and the United States. The coarse stuffs are principally disposed of in the City.

Mr. James McDougall has a large Flouring Mill adjoining, of which we have received no account. Both have elevators attached.

Foundry.—Mr. E. E. Gilbert's "Beaver Foundry" was established in 1849. Steam engines are manufactured here. The buildings are of brick and wood, covering an area of 12,750 square feet, and the yards and ground adjoining, about 7 acres. The buildings, machinery, land, &c., cost £13,450 or $53,800. From 60 to 80 men and boys are employed here, receiving weekly wages amounting to about £100 per week. During the six months ending 1st October last, £7300 or $29,200 were turned out of this establishment, all for Canadian use. Double the quantity could have been turned out.

The St. Lawrence Engine Works.—Messrs. Bartley & Dunbar, Proprietors, were established in 1850. They consist of:—1st, A Smith's Shop, 65 by 50 feet, with 9 fires, with finishing and shearing machines, and a trip hammer, with which shafting 4 by 10 inches can be forged. 2nd, A Boiler Shop, 80 feet by 60, with 5 fires and a large quantity of machinery. Among the machinery is a punching machine, worked with a rack, whose work is mathematically correct, saving the tedious and expensive process of rimming holes to admit the rivet; and large rollers which will bend boiler plate length-

wise 9½ feet long, without hammering; and a hydraulic pump for testing boilers. The machinery here is driven by a 30 horse-power water-wheel. 3rd, Foundry, 70 by 60 feet, with facilities for making the heaviest castings required in this country. 4th, The Pattern Shop, 50 feet by 40, with accommodation for 10 or 12 pattern-makers. 5th, The Finishing Shop, 105 feet long by 50 feet wide, and three stories high, containing a large quantity of machinery of various sorts, of the best description, with the latest improvements, driven by a 25 horse-power water-wheel, and a 20 horse-power steam engine, when the water is drawn off the canal for repairs. The number of men and apprentices employed here is 160, receiving wages amounting to £190 or £200 per week,—they have gone as high as £325 per week. The work produced per annum is valued at £40,000, with capacity for extension to £70,000 or £80,000. The work done here, heretofore, has been for Lower Canada, with the exception of the iron steamer "Kingston," now plying between Toronto and Kingston. They are now executing an order for boilers for a powerful ferry steamer, which is being built by the Great Western Railway Company, for the Detroit River. They possess peculiar facilities, with a boat shed, &c., on the bank of the canal for the construction of iron boats, and fitting the boilers and engines into steamers. They have now under contract three iron vessels, for the Trinity Board of Montreal. They execute all sorts of boiler and engine work, heavy blacksmithing, iron and brass castings, and mill-work.

Messrs. Campbell & Jones, Canal Basin.—Established, in 1855, a manufactory of saws at the Canal Basin. They use machinery propelled by water of forty horse power. They produce about $15,000 worth annually, of which they sell to places out of Montreal about $8500. They have the necessary appliances to supply the whole Canadian market. This is, we believe, the first and only establishment of this kind in Lower Canada. Although very recently established the business is rapidly increasing.

Lymans, Savage & Co., Linseed Oil, Paint, Drug and Spice Mills,—Established in 1852. The building is 60 by 40 feet, built at a cost of £10,000, propelled by hydraulic power equal to four runs of stones. They employ from 30 to 35 men, paying about £50 wages weekly, with a capital of about £15,000. They manufacture 30,000 gallons of linseed oil, 500 tons linseed cake, 100 tons putty, and 25 tons of paint, grinding 20 tons drugs and spices, amounting in value to £30,000. 450 tons of linseed cake are exported to England, four-fifths of the remainder sent to places in Canada out of Montreal.

Saw Mills, &c.—There are several saw and planing mills in the City, but only a few returns have been received from their proprietors. Messrs. Grant, Hall & Co. built one at the Canal Basin in 1851, in which are employed 3 circular saws, 2 planing machines, and a barrel machine, propelled by a water-wheel, with 80 horse-power; 70 persons are employed by it. They can plane and dress 1,000,000 pieces, say, of flooring, and saw 10,000,000 feet of lumber per annum. It is all sold for home consumption, a 30 per cent. duty shutting out dressed lumber from the United States market.

Mr. T.D. Bigelow's, City Nail and Spike Works,—Were established over 60 years ago, with one or two machines, in 1839 he had 5 machines, propelled by horse power, and employing 20 men. After the water power at the canal basin was opened up to the public use, Mr. Bigelow removed there. He now uses 54 nail machines, 4 spike ditto, 1 shoe sprig and 1 tack ditto, with shears, grind-stones, &c., propelled by water. About 50 men and 10 boys are generally employed here, earning 15s., 30s., and some 90s., per week. The works are now turning out from 1200 to 1500 tons of nails per annum, and can, if pushed to their full capacity, turn out 2000 tons of nails and 500 tons of spikes.

There are besides, at the canal basin, another Foundry and Engine Works of considerable extent, of which Messrs. Milne & Millu are the proprietors; Mr. Berry's Sewing Machine Factory; an extensive Nail-Cutting Works, and the Messrs. Tait's Dry Dock and Ship Yard, of which returns have not been sent in.

FACTORIES IN THE CITY.

Messrs. Wm. Smyth & Co., Wholesale Boot and Shoe Manufacturers,—Began business in Montreal in 1843, keep 8 sewing besides other machines, and employ 80 hands, male and female, on whom £75 per week are expended. Messrs. W. Smyth & Co. received an award of medals both for superiority of work and cheapness, at the Paris Industrial Exhibition, and have likewise been favorably noticed since at Exhibitions both in Canada and the States.

Messrs. Brown & Childs,—Established in Montreal a very large establishment for the manufacture of boots and shoes, into which they have from time to time introduced the latest inventions and improvements of machines for shaping, sewing, &c. They employ 800 persons, and turn out about 100 pairs of boots and shoes daily, a large portion of which are sold to places out of Montreal.

Messrs. W. Hyatt & Co., Montreal Marble Works,—Hold large premises in Craig Street, have a capital of about £1500, produce manufactures to the amount of £3000 or £4000 yearly, mostly for home consumption. This business, though of late growth, has, in Messrs. Hyatt & Co.'s case, been making considerable advances for the last few years.*

Mr. Charles Garth, Coppersmith, &c.—Business established in 1838; holds a brick house, which, with lands attached, he values at about £4000; has numerous engines, boilers, &c.; keeps an annual average of 40 men and 12 boys, who get from £85 to £100 weekly; manufactures goods to the amount of from £15,000 to £30,000, two-thirds of which are for home consumption. Mr. Garth believes that this branch of trade may shortly, with the advantage arising from the opening of the Grand Trunk Railway, increase to ten-fold its present importance.*

Messrs. J. & W. Hilton, Cabinet Makers, &c.,—Commenced in 1845, have a capital of £15,000, hold a brick house, value £3000, have numerous engines, and employ on an average 82 hands, to whom they pay all £116 weekly. Their yearly manufactures amount to from £20,000 to £30,000, of which about two-fifths are exported. This branch of trade dates its rise in Montreal from 1820.*

Messrs. R. & A. Miller, Publishers and Bookbinders,—Were established in 1843, use various machines for cutting, &c.; employ 20 hands, at £60 per month. School Books, &c., amount to 20,000 copies per annum. Binding and ruling alone give a sum of £2400. Most of the books got up by this Firm are sent to Upper Canada. Business steadily increasing.

Mr. Hew Ramsay has also a large establishment of this sort. Particulars, not furnished.

The Committee subjoin a list of eleven other bookbinding establishments, employing altogether about 75 men, viz:—Weir & Dunn, J. Parslow, C. Bryson, R. Graham, E. C. Tuttle, F. C. & A. Dredge, W. McIntosh, Beauchemin & Payette, J. B. Rolland, Chapleau, and Lamothe.

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* Other establishments of this sort, of whose existence the Committee are aware, not noticed, information not being furnished.

Messrs. Green & Son, Furriers, &c.,—Were established in 1832; hold a house valued at £4,000, employ 12 men and 115 females, at wages of £200 monthly. Messrs. Green & Son have a capital of £15,000, and of their manufactured goods one-fifteenth are for home consumption. They think that by having raw skin and furs from all countries free, and a judicious duty on manufactured articles, this trade might be extended to six times its present importance.

Messrs. McDowell & Atkinson, Wholesale Furriers, &c., 92 McGill Street,—Established in 1842, employ 20 men and 75 females, to whom they pay 233 dollars per week. Their capital exceeds £4000, and of their manufactures to the amount of £70,000 per annum, one-fourth is for home consumption. Messrs. McDowell & Atkinson have lately established a Factory for Buckskin Mits and Gloves, and will thereby be able to make those articles very cheap. They also make 3000 silk and from 4000 to 5000 fur hats in the year.*

John Henderson & Co., late Henderson, Brothers & Co., of Quebec,—Established in Montreal a branch of their business in the year 1844, and have been steadily increasing their business year after year; they now have one of the finest establishments in America, in their line, and are daily manufacturing some of the choicest Furs produced on this Continent, which always meet with ready sale. They employ upwards of fifty hands, and have a large capital profitably invested, and look forward with cheering prospects to the future.

Messrs. Moss & Brothers, Clothiers, &c.,—Were established in 1836, have a capital of £60,000, hold large premises, five stories high, give employment to 800 men and women, at £450 monthly, and of goods manufactured annually to the sum of £90,000 they send abroad about eleven-twelfths. Messrs. Moss & Brothers have all their work hand-wrought, and export American wares to Australia to the annual amount of £40,000.

Messrs. McMillan & Carson, Clothiers,—Commenced in May, 1854, have a capital of £2000, employ 43 hands, at £50 a week, and of goods manufactured to the sum of £10,000, £4,000 worth are exported.*

Mr. J. W. Crerar, Confectioner,—Was established in 1833; has a capital of £2000, holds a factory at a rental of £250, employs 7 males, at £150 a year. Quantity of goods sold for home amounts to £8250, for abroad £2750.

Messrs. John Aitken & Co., Shirt Makers, &c.,—Were established in 1851, have a capital of £3000, employ 300 women, manufacture goods to the amount of from £9000 to £10,000 annually, of which one half is for home consumption.

Mr. S. B. Scott, Shirtmaker, &c.,—Factory established in 1854; has a capital of $6000, uses 10 sewing machines, employs 100 men and women, manufactures to the amount of $25,000, about one-half of which is for home consumption.

Mr. E. S. Normandeau, Carriage Maker,—Was established in 1851, has capital of £500, gives employment to 8 men, at £10 weekly, manufactures about 100 vehicles, at from £5 to £60 each, all for home consumption.

Mr. Martin Gravelle, Carriage Maker,—Was established in 1841, has a capital of £3000, rents premises at £50 per annum, employs 10 men, at from 30s. to 42s. 6d. a week, makes carriages to the value of £3000 yearly, all for the Canadian trade. Mr. Gravelle says that the improvements in his line are constant and marked, owing to the great competition, which also renders the profits very low.

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* Other establishments of this sort, of whose existence the Committee are aware, not noticed for information not being furnished.

Mr. Michael O'Meara, Carriage Maker,—Established in 1820, produces manufactures to the amount of from £10,000 to £15,000, nearly all for home consumption. Mr. O'Meara thinks that this business in Montreal is of a purely local nature.

Mr. Joseph Tees, American Carriage and Sleigh Maker,—Employs 12 men, at £20 per week, manufactures goods to the amount of £2750 per annum, half of which is for home consumption. Mr. Tees received the First Prize for a light pleasure carriage, built on a new system, at the Provincial Exhibitions lately held at Kingston and Three Rivers. Mr. Tees thinks that this trade is increasing in Montreal, and that carriages can be made here to compete in quality and cheapness with any on the Continent.*

Manufactures of Tobacco.—Previously to the Reciprocity Act and Treaty, Leaf Tobacco of the growth of Canada West was sent here annually for sale. Since the free admission of United States, this has no longer been the case, the cultivation having been partially abandoned. A little tobacco is grown also in Lower Canada, but the climate does not permit it to ripen properly here.

The imports of unmanufactured tobacco from the United States in 1855 amounted to 719,000 lbs., of which 263,000 was brought to Montreal. There are twelve establishments here engaged in the manufacture of Tobacco, Segars and Snuff. The total import into Canada of segars last year was 5311 mille, of which only 1660 mille were brought to Montreal. About four millions are said to be manufactured here, giving employment to 100 persons. Six of the above establishments are principally engaged in the manufacture of snuff, of which five use steam power. The importation into the Province last year was 37,875 lbs., of which Montreal imported only 1614 lbs., there being manufactured in this City at least 250,000 lbs. Messrs. Joseph & Co., and Levey & Co., are the only persons who furnished the Committee with returns, the latter stating his manufactures at 25,000 lbs. snuff, 250 mille segars, and 160 cwts. of various kinds of tobacco, sold about half in Lower and half in Upper Canada.

The Eagle Foundry, in Griffintown, of which Mr. Geo. Brush is the present proprietor, was established in 1823, and here and at the St. Mary's Foundry (the latter having been closed since the opening of the canal factories) were for many years manufactured all or nearly all the engines used in the steamers upon the St. Lawrence and elsewhere in Canada. The Eagle Foundry, notwithstanding the competition of its new rivals, is still at work, having a complete set of shops and machinery for the construction of Engines, Boilers, &c., in which are employed about 100 men.

Mr. W. Rodden has an extensive Foundry in the City also, of which the Committee have been unable to give an account. Of Mr. C. P. Ladd's Foundry also, where, as in the first named Factory, large quantities of stoves are manufactured, the Committee have received no account.

Mr. C. S. Rodier, Jr., Threshing Machine Maker,—Was established in 1851, holds a large wooden building, uses steam, employs 36 men, at 6s. 3d. a day, and makes yearly 250 machines, all for Canada.

Mr. John Smith, Manufacturer of Threshing Machines, &c.,—Was established in 1853, holds a two-story brick shop, which, with some adjoining houses, &c., cost 4000 dollars, uses water power, employs 35 men, at 200 dollars a week, has a capital of 30,000 dollars, manufactures yearly goods to the amount of 30,000 dollars, *for both Provinces*.

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* Other establishments of this sort, of whose existence the Committee are aware, not noticed, information not being furnished.

Messrs. B. P. Paige & Co., Patent Threshing Machine Factory,—Established in 1848, occupies four main buildings of about 100 feet by 50 each, besides out-buildings. There are filled with machinery of the best description, propelled by a 50 horse-power steam engine. The cost of the establishment was £12,500; 175 men and boys are employed there, at wages of £600 per month. About £37,000 capital has been embarked, £25,000 worth of products turned out annually; half sold here and half exported. There is an increased demand both for home consumption and export, and the business is steadily increasing.

Wm. Johnson & Co., Threshing Machine and Agricultural Implement Factory,—200 by 150 feet, cost £1500; machinery propelled by a 20 horse-power engine; from 60 to 100 men employed, to whom is paid about £300 per month £8000 of manufactures turned out last year, and the Factory could manufacture as much more. The machines are copied from Pitt's Patent, first imported here in 1842.

Mr. Wragg's Nail Factory, William Street,—Occupies a two-story brick building, uses steam power, has 25 nail-cutting machines, keeps 30 men, at 6s. 3d. a day, and makes annually 900 tons of nails.

Mr. Wm. Burry, Millstone Factory, 524 St. Joseph Street,—Was established in 1840, employs about 10 hands, at an average of 10s. a day, manufactures yearly about 50 pairs of millstones, of which 5 per cent. are sold for home consumption. Mr. Burry intends importing his stock direct from France next year, and promises to furnish the goods connected with this business as cheaply as any in Canada.

Mr. Neil Doherty, Manufactory of Tobacco Pipes,—Was established in the year 1850, has now a capital of £15,000, employs from 20 to 25 hands, and manufactures yearly from 4500 to 5000 boxes, which are all consumed in the Canadas.

Messrs. John Mathewson & Son, Soap, Candles, and Oil Manufactory, Inspector and College Streets,—Was established in 1821, hold a three-story stone and brick building; have all their work done by steam, and employ 38 men, at £15 per week. A large quantity of very excellent wares are turned out of this establishment.

There are several other large establishments of a similar nature in the City, but we have no farther returns.

George Perry, First Prize Fire Engine Factory.—This Factory was established in 1848. Efforts have been made to produce the very best work. As a proof of the result it is only needful to mention that an Engine produced in this factory obtained a Prize Medal at the Great Exhibition at London in 1851, and a first-class Medal at Paris in 1855. The effect has been to give this factory orders from all parts of Canada, and from France, England, and the Lower Provinces. Shortly after the London Exhibition, an engine was ordered from, and sent to parties in British Guiana. The prospects of the establishment are good, and the opening up of the Western Canadian market during winter by railway is giving it additional work, parties coming here for engines who might have gone to the States. The number of small engines manufactured here is too large to give in detail, but during the past year Mr. Perry has turned out the following first-class engines, viz:—one for Grand Trunk Railway Works, Point St. Charles; one for Orono, C. W.; one for Liverpool, Nova Scotia; one for Woodstock, New Brunswick. Several others are now in course of construction.

Mr. William Perry has also a Factory of fire engines. Details not furnished.

Mr. R. Dean, Trunk, Bellows and Mail Bag Factory.—He makes 3000 trunks and valises, 100 pairs bellows, 400 to 500 different kinds of mail bags, per annum, worth about £6000. Received first prizes at Provincial Exhibition, and honorable mention at the London Exhibition.

Mr. Charles Linley—Manufactures Circular Patent Double-blast and Long-shape Bellows, Portable Forges, &c., using a steam engine to propel circular and upright saws, &c. He turns out 600 pairs per annum, and might, with his present machinery, double the product. Three-fourths of his manufactures are sold to places out of Montreal.

Messrs. E. Atwater & Co.,—Have recently established here a Copal Varnish Factory in which they manufacture about 500 barrels per annum, and are fast driving the imported out of use.

Mr. Clark Fitts, Biscuits and Cracker Bakery,—Established in 1827; uses two shops with machinery, manufactures 4300 barrels, worth about £5925, sold principally in Lower Canada and eastern part of Upper Canada.

Mr. Tilton manufactures ship and other biscuit to a considerable amount.

Messrs. Withall & Hood, Soap and Candle Factory,—Established in 1850, occupies two buildings, 100 feet long and 3 stories high, the machinery propelled by steam. Thirty men are employed, and turn out 20,000 boxes soap and 10,000 boxes candles per annum, worth about £36,000, all sold in this market and Quebec.

Paper.—In addition to the manufactures in Montreal itself, it may not be improper to notice some of those factories in the vicinage, for which Montreal is the chief depot and market. Among these is the Paper Manufactory of the Firm of Alex. Buntin & Co., Montreal, and W. Miller & Co., of Beauharnois, who have taken advantage of the water power, of the Beauharnois Canal. The manufacture of paper seems to have been attempted in Lower Canada about 40 years ago, but one by one the old works were abandoned and allowed to go to ruin. It was only 15 years ago that this manufacture took a firm footing. The manufacture and business mentioned above was established by Mr. W. Miller in 1834, but the present Factory on the Beauharnois Canal has been put in its present effective state within a few years past. The Factory consists of substantial stone buildings in form of a square, three stories high, front 90 by 50 feet, right wing 120 by 40, left 40 by 30, and rear 90 by 40, erected at a cost, for building and machinery, of £12,000 or $48,000. The machinery employed consists of one 84 inches wide Fourdrennier Paper Making Machine 5 large iron engines, 2 large revolving boilers for steam boiling the materials, another steam boiler for heating and drying purposes, and a variety of other machinery of the best description, all propelled by water-power, which is here afforded them to an almost unlimited extent. The works are capable of indefinite extension, as the market improves and is extended. 26 men and 45 women are employed here constantly, with occasional assistants, besides the large number engaged in collecting materials. Wages paid, about £400 per month. About 500 tons are annually manufactured here, worth £34,000, the capital permanently invested being about £25,000 or $100,000. One-third is sold for Lower Canada consumption, the other two-thirds to Upper Canada. Export is prevented by high duties in Britain, the United States and sister Provinces.

At Sherbrooke, which is brought by the Grand Trunk Railway within very easy access of Montreal, Mr. W. Brooks established a Paper Mill in 1846, the produce of which is almost altogether sold in Montreal, Mr. J. Dougall being the agent. It consists of three buildings, one of brick and stone, 80 by 50; the others of wood; all erected at a cost of £6000 or $24,000. It contains six engines and two paper machines, propelled by water-power. The manufactures annually amount to about £10,000 or $40,000, the capital embarked being of a like amount. It might be doubled.

The Portneuf and Wood End Paper Mills,—Though situated at some distance from Montreal, take the greater part of their material thence, amounting to about 1,600,000 lbs. rags and other stock, besides chemicals, &c., and sell nearly all their paper through

Mr. Chalmers here. The Factory was established in 1840; the two mills having cost £25,000; four engines and a Fourdrennier machine being employed in one, making writing and printing paper, and three engines and a Fourdrennier machine in the other, making wrapping papers. All are propelled by water, about 85 horse-power being used: 46 men and 50 women and boys are employed, to whom about £300 are paid monthly. About £35,000 capital has been embarked. About 1,200,000 lbs. of paper, worth about £25,000, is manufactured here per annum. Of this about £9000 finds a market at Quebec; the rest comes to Montreal, say £5000 for consumption here, and the remainder sold to Upper Canada. The proprietors of these mills are now manufacturing a considerable quantity of writing as well as printing and wrapping paper.

We are informed that about 1200 tons of rags are collected here each year for these factories and for export, at prices varying from 2½ to 4 cents per pound.*

At Sherbrooke, Mr. Loomis established a Woollen Factory in 1842, with 756 spindles, and 9 looms, besides cards, machines, jacks, &c., driven by water-power. The annual produce is about 60,000 yards of woollen goods, worth about $36,000; the capital embarked being about $25,000. The goods are nearly all sold by Mr. Dougall, in Montreal.

Stained Glass.—Mr. Spence has an establishment for this description of work.

As shewing the excellence of Montreal manufactures, a list is subjoined of those which obtained medals, when competing with the World at London and Paris. The following medals were awarded to Montreal manufactures, at London, in 1851, viz., :—

George Perry, First Class, for a Fire Engine.
Robert Morris, " " for Saddlery.
J. Robb, " " for Biscuits.
Hon. J. Ferrier, " " for Iron.
C. T. Palsgrave, " " for Type.

The following were awarded at Paris, in 1855, viz.:—

George Perry, for a Fire Engine,	First Class	Medal.
Lymans, Savage & Co.,	"	"
John Ostell, Blinds, Sashes, &c.	"	"
W. Rodden, Machine Table.	"	"
D. Munro, Planing Machine,	Second Class	"
B. P. Paige, Threshing Machine	"	"
A. Cantin, Ship Models,	"	"
L. Scott, Edge Tools,	"	"
J. J. Higgins, Axes,	"	"
W. Parkyn, Shovels,	"	"
J. & W. Hilton, Furniture	"	"
Montreal Rubber Co., Rubber Shoes	"	"
C. Fitts, Biscuits,	"	"
W. Smyth, Shoes and Boots	"	"
E. Idler, Cured Provisions	"	"

* Mr. Russell's Lorette Mill is the only other establishment of the kind in Lower Canada, and this too sends no inconsiderable share of its manufactures to Montreal for sale.

CONCLUSION.

We have thus given, in a concise form, a description of the commercial advantages enjoyed by Montreal, and the disadvantages which have, from time to time, hindered her progress; and have added an imperfect sketch of her manufactures as yet in their infancy, but growing and in a healthy condition. The navigation to the West was obstructed by rapids and cataracts. The enterprise of the Province has overcome these obstacles by a chain of canals unrivalled in the world. Large vessels, suited to the modern requirements of trade, could not come here because of shoals in Lake St. Peter. The enterprise of the City of Montreal, almost entirely unaided, is fast digging a channel of 20 feet in depth through these shoals, and has already, as we have elsewhere stated, increased its depth from 11 to 18 feet. Railways diverted traffic to the ports on the seaboard of the United States, which were made convenient of access by them, summer and winter, to Western buyers. Montreal commenced and carried through railways to winter ports on that seaboard, for her own accommodation. The Province has built this new railway to join her to the rich wheat-fields of the West. Steamships, liberally subsidized, drew a good deal of our traffic with Europeans, over the railways of the United States to their seaboard cities. Canadians have met this by a line of steamships of their own, subsidized by themselves, and in this new mode of competition they have met with a triumphant success. The difficulties presented by the land-locked navigation below Quebec to sailing vessels, alluded to elsewhere, are being speedily obviated. Powerful and swift tugs of the very best description are now employed in assisting these vessels through that portion of their voyage, and their use is already reducing the rates of insurance. The Government of the country is fast lighting all the lower St. Lawrence, so as to render its navigation as safe as any in the whole world. Finding this navigation best adapted to vessels propelled by steam, some of our enterprising ship-owners propose to fit their first class sailing vessels with auxiliary screws to be used after entering the gulf, inward bound, or in getting out to sea on their outward voyage. Though, in the past, they may, in some respects, have been too slow to adapt themselves to the changing phases of modern commerce, yet there is, in the facts we have stated, proof that the merchants and citizens of Montreal,—nay, the whole people of Canada,—are fully awake to the requirements of the age, and are determined not to lag behind. There is ample ground for the belief that a day bright with unexampled commercial success has just dawned upon them, that the merchants and manufacturers of the East are about to participate in the great prosperity which the agriculturists of the West have enjoyed for some years past, and that the whole of Canada will continue to advance steadily in that career of progress and prosperity, on which it has so auspiciously entered. Bound to Western Canada, not only by political and social ties, but by their great lakes, and the majestic river in the midst of which she is planted; and by this newly forged iron link; connected with the fertile prairies of the Western States by these same avenues of commerce; an eastern City herself, and sharing the fortunes of the eastern seaboard of this new world, Montreal can only hope to prosper with the prosperity of those with whom she is thus allied. Her fortunes are bound up with theirs alike by natural causes and her own endeavors, and she may fairly hope to win a good share of the wondrous prosperity which has been vouchsafed to them

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